



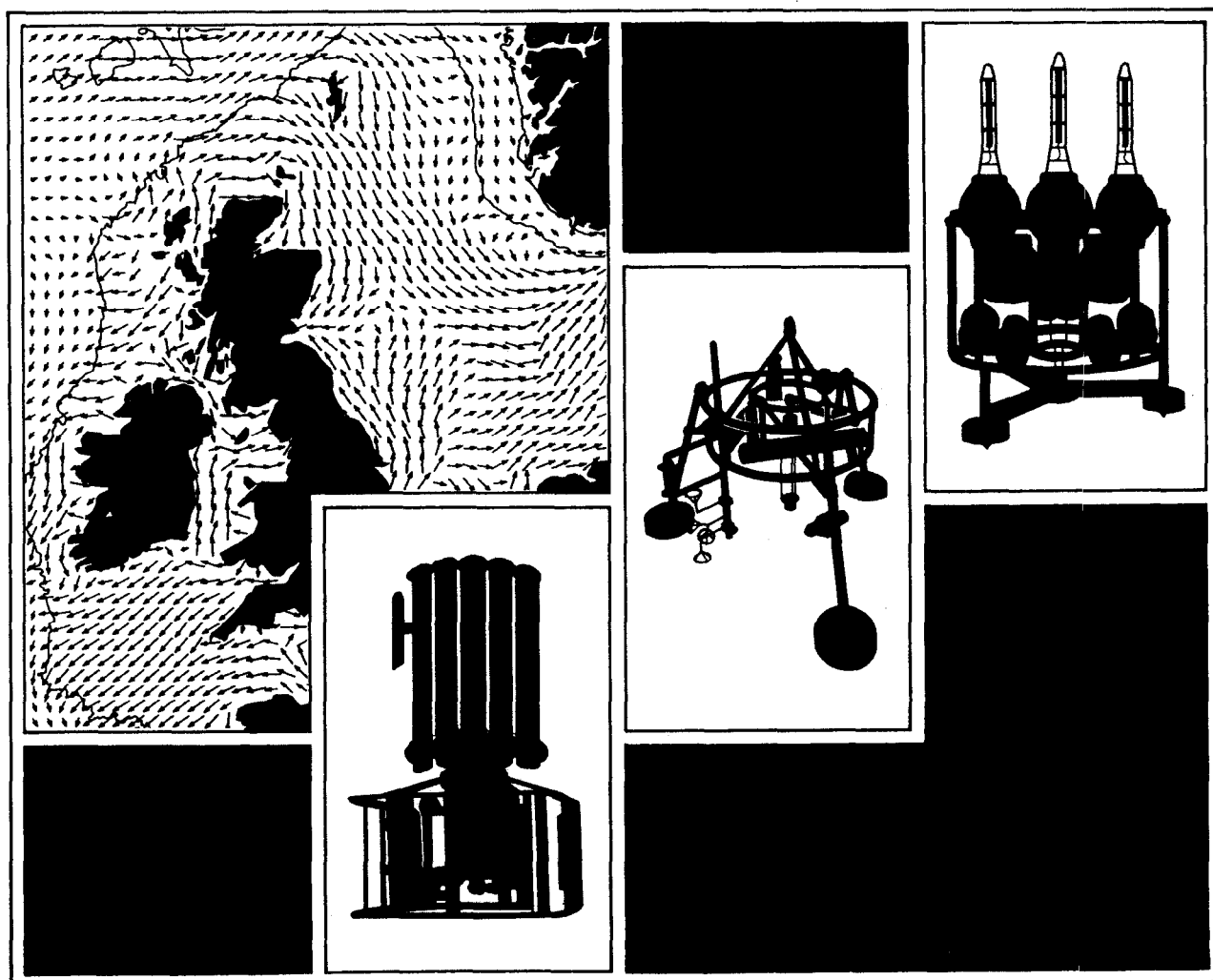
**Proudman
Oceanographic
Laboratory**

Current meter records Site F – 52° 37'N 03° 46' E

August 1988 – September 1989 North Sea Project

Knight PJ Falconer J and Howarth MJ

Report No 11 1990



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REPORT No. 11

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DOCUMENT DATA SHEET

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ABSTRACT This report describes results from a current meter rig positioned at site F during the North Sea Project. Site F was one of six current meter sites used throughout the survey part of the experiment. Standard plots are shown as well as statistical output from the calibrated current meter records.		
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Meter No 9347	111
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Meter No 1265	120
Meter No 9352	121
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Meter No 9352	136
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Meter No 1261	145
Meter No 9419	151

1 INTRODUCTION

Fifteen months of data were gathered in the southern North Sea as part of the North Sea Project, a NERC Community Research Project. Each month the RRS Challenger ship time was split between a two week survey and a two week process cruise.

This report describes the results from a current meter mooring at 52° 37'N 03° 46'E deployed during the survey cruises. The mooring was first deployed on survey cruise Challenger C33/88 and subsequently re-deployed during follow-up cruises between August 1988 and September 1989.

Figure 1 shows the position of the mooring, site F, and its relative position to other sites in the North Sea. It was one of six current meter moorings deployed during the North Sea Survey, and was situated in a region of strong tidal currents, up to a maximum of 1.0 m s^{-1} , and in relatively shallow water; the depth was 30m. These two factors produced well mixed conditions through the water column, throughout the year.

The mooring, Figure 2, contained two current meters, an InterOcean S4 at 12m from the bottom and an Aanderaa RCM 7 at 7m from the bottom. The S4, an electromagnetic current meter, measured vector averaged North and East components of current velocity. The RCM 7, a rotor/paddle current meter, sampled the current every 1/50th of the recording interval and parameters every recording interval. It was primarily used to measure conductivity, pressure and temperature, although averaged current speed and direction were also recorded. The pressure sensor, not of tide gauge quality, was used as an indication of mooring stability.

After calibration, statistics were calculated from the data and a low pass filter was applied to produce six hourly values which were also statistically analysed. Finally standard current meter plots were produced in order to check data quality and aid in interpretation of the data.

The data return from these deployments was good, although two meters gave no results and two meters had reduced good data return. The mooring was not deployed on cruises C41/88 due to lack of equipment caused by losses at another site, C45/89 due to damage of equipment on recovery, and C47/89 and C49/88, because of problems with the S4's lithium batteries. The current meters on the mooring returned 85% good data when deployed, although the percentage reduces to 60% when non-deployed meters are included.

2 SUMMARY OF DEPLOYMENTS

The following information gives an overview of the data processed at site F during the North Sea project.

Mooring	Meter No	Deployment	Recovery	Meter Ht(m)	Data length	Comments
C33FC	1117	05-AUG-88	06-SEP-88	12	30.6 days	Good data set
C33FC	9348	05-AUG-88	06-SEP-88	7	30.6 days	Speeds larger than expected
C35FC	1121	06-SEP-88	02-OCT-88	12	26.4 days	Good data set
C35FC	9348	06-SEP-88	02-OCT-88	7	26.4 days	Speeds larger than expected
C37FC	1121	04-OCT-88	02-NOV-88	12	28.6 days	Good data set
C37FC	9348	04-OCT-88	02-NOV-88	7	28.6 days	Good data set
C39FC	1117	02-NOV-88	02-DEC-88	12	29.8 days	Good data set
C39FC	9347	02-NOV-88	02-DEC-88	7	29.8 days	Good data set
C43FC	1117	07-JAN-89	29-JAN-89	12	22.0 days	Good data set
C43FC	9347	07-JAN-89	29-JAN-89	7	9.6 days	Short by 12.4 days
C51FC	1263	28-APR-89	27-MAY-89	12	0.0 days	No data present
C51FC	9347	28-APR-89	27-MAY-89	7	10.7 days	N/E Short by 18.1 days
					29.6 days	T/S/P Good data set
C53FC	1119	29-MAY-89	25-JUN-89	12	27.1 days	Good data set
C53FC	9347	29-MAY-89	25-JUN-89	7	27.1 days	Good data set
C55FC	1265	25-JUN-89	25-JUL-89	12	0.0 days	Corrupted data
C55FC	9352	25-JUN-89	25-JUL-89	7	30.1 days	Good data set
C57FC	1261	27-JUL-89	24-AUG-89	12	28.2 days	Good data set
C57FC	9352	27-JUL-89	24-AUG-89	7	28.2 days	Good data set
C59FC	1261	25-AUG-89	22-SEP-89	12	27.3 days	Good data set
C59FC	9419	25-AUG-89	22-SEP-89	7	27.3 days	Good data set

3 RIG SYSTEM DESCRIPTION

The mooring was deployed in a water depth of 30m at latitude of 52° 37'N and longitude 03° 46'E. It consisted of two current meters at 7m and 12m above the sea bed. Figure 2 shows a schematic diagram of the mooring which is a standard 'U' shape.

4 CURRENT METER SPECIFICATIONS

The top meter was an InterOcean System Model S4 and the bottom meter was an RCM 7 Aanderaa. The primary reason for deploying the Aanderaa was to measure parameters such as conductivity, temperature and pressure. The RCM 7 also measured speed and direction, but this type of meter does not perform well in the wave zone and its velocity record should be treated with circumspection.

4.1 S4 current meter

The InterOcean Systems Model S4 electromagnetic current meter is a self contained 0.25m diameter sphere, with no protruding sensors. It measures current by creating a magnetic field and sensing the voltage induced in two orthogonal directions, by the movement of the sea water, an electrical conductor, through the field. This information is combined with the instrument orientation, sensed by a Flux-Gate compass, and the North and East components computed. The S4 at this site was used in vector average mode throughout the survey. It sampled every $\frac{1}{2}$ a second and averaged the vectors over a 10 minute recording interval.

4.2 S4 specification

Speed	Range	0 to 350 cm s ⁻¹
	Accuracy	±2 cm s ⁻¹
Direction	Range	0 to 360°
	Accuracy	±2°

4.3 RCM 7 current meter

The Aanderaa RCM 7 current meter is a self-recording current meter. Temperature is measured by a thermistor fitted into a stud extending into the water. Conductivity is measured by an electrodeless induction conductivity cell and pressure is measured by a sensor consisting of a potentiometer driven by a Bourdon tube. A vane is attached to the meter in order to align the compass with current flow and keep the meter in an upright position. The velocity of the current is measured with a half shrouded paddle wheel situated on top of the meter. During the selected recording interval of 10 minutes the number of rotor revolutions and the direction of the compass are sampled every 12 seconds and broken up into North-South and East-West components. When the 10 minute recording interval has elapsed, the resultant average vector and its angle is calculated and recorded.

4.4 RCM 7 specification

Speed	Range	2 to 250 cm s ⁻¹
	Accuracy	±2 cm s ⁻¹
Direction	Range	0 to 360°
	Accuracy	±5°
Temperature	Range	-2.46 to 21.4°C
	Accuracy	±0.05°C
Conductivity	Range	21 to 51 mmho cm ⁻¹
	Accuracy	±0.025 mmho cm ⁻¹
Pressure	Range	0 to 100 PSI or 0 to 200 PSI
	Accuracy	±1%

5 DATA PROCESSING STEPS

Data from the different meters were handled in similar ways. The S4 and RCM 7 data were transferred from the recovered meter directly to an IBM PS/2 on board RRS Challenger and then loaded onto a 3.5 inch floppy disk which was brought back to the Proudman Oceanographic Laboratory. Both types of data were then transferred again, to the IBM 4381 mainframe via a 3270 terminal emulator on the IBM PS/2.

Two software systems, CALT and CALP, were developed at POL for quick and efficient processing and display of times series data, such as current meter data. The CALT system calibrates and checks for errors and the CALP system produces standard graphical output, filtered and non-filtered statistical analyses.

Before calibrating the data, all the information required for processing were input into an ORACLE data base. All the information can be accessed easily with FORTRAN programs.

Processing was then initiated by CALTUX, which calls a suite of FORTRAN programs for error checking and producing calibrated data. Any errors found from the initial run were edited out of the raw data and CALTUX run again.

After successful completion of the CALTUX stage another suite of FORTRAN programs initiated by CALPTX were used to produce standard current meter graphical output, low pass filtered output and statistics for non-filtered and filtered data. The types of plot obtained, details of filtering and statistics are explained in more detail in the following sections.

6 DETAILS OF STATISTICS AND FILTERING

6.1 Simple statistics

A simple statistical analysis was carried out on each calibrated data set. The following statistics were calculated :-

- (1) Mean, variance and standard deviation of the East and North components of velocity.
- (2) The mean vector speed and direction were calculated from the above statistics.
- (3) The maximum ten and minimum ten Northings and Eastings and the top speeds.

6.2 Variance ellipse statistics

Statistical analysis was also carried out on the ellipse which can be graphically represented by a scatter plot. The following statistics were calculated :-

- (1) The maximum and minimum variances and their ratio (minimum/maximum). If the ratio is near to one the currents have no preferred direction, whilst if it is near to zero the flow is rectilinear.
- (2) The direction associated with the maximum and minimum variance, in the range of -180° to $+180^\circ$.
- (3) The total variance which equals the sum of the North and East component variances or the sum of the maximum and minimum variances.
- (4) The average direction for each half of the ellipse, related to the directions of maximum variance. If these directions differ by 180° the scatter plot is symmetrical.

6.3 Filtering

The ten minute calibrated data were also low pass filtered, see Figure 3 which shows the filter's response function, and sub-sampled every 6 hours. Three days of data are lost at the beginning and the end of the record. The statistical analysis was repeated on the filtered data set.

7 FORMAT OF DATA OUTPUT

All speeds and velocities are in m/s, directions in degrees true and time in GMT. The results are ordered by mooring number (See page 8). Each mooring result is made up of mooring information, meter information, graphical output, statistics (unfiltered and filtered) and additional graphical output with the S4 first followed by the RCM 7.

7.1 Mooring information

Position latitude	: Latitude of deployment
Position longitude	: Longitude of deployment
Water depth(m)	: Depth measured from ship's echo sounder
Deployed on cruise	: Cruise identifier
Recovered on cruise	: Cruise identifier
Site name identification	: Additional site identifier
Magnetic deviation	: Taken from charts
Rig deployed on	: Time surface buoy released
Rig recovered on	: Time release fired on rig
Period of deployment	: Total time of deployment
Comments	: Details regarding mooring

7.2 Meter information

Rig number	: Unique POL mooring/rig reference
Meter number	: Four digit current meter number
Sample interval	: Sampling interval in seconds
Meter height from bottom	: Height in metres
Position of meter on rig	: T for top B for bottom
Meter type	: S4 for InterOcean AS for Aanderaa RCM 7
Meter started	: Date and time
Meter stopped	: Date and time
Time of last valid scan	: Used when good data ends before switch off
Period in days on record	: Total time meter switched on
Total number of scans	: Used to check timing
Timing error	: Error in seconds
Comments	: Details regarding meter

7.3 Graphical output

- (1) North and East components of velocity against time. The semi-diurnal nature of the tides can be seen as well as the Spring/Neap cycle in both components of velocity.
- (2) Histograms of speed and direction. Indicates the spread of speeds and directions throughout the deployment period.
- (3) Scatter diagram of North component of velocity against the East component. Shows the direction and magnitudes of the currents. This plot is often a good check on the quality of the data, in particular regarding direction and possible problems at low speeds.
- (4) Eulerian progressive vector plot. The nature of the residual flow is emphasised, although the semi-diurnal tides are also apparent.
- (5) Temperature, salinity and pressure against time (only for RCM 7's). Salinity is calculated from temperature, conductivity and pressure.

7.4 Statistics of unfiltered and filtered data

This is followed by simple statistics of the calibrated data and filtered data. The filtered statistics page is indicated by the letter 'F' at the end of the file type printed at the top of the page. The section is finished with the following plot using the filtered data.

7.5 Additional graphical output

- (6) Stacked filtered stick plot. The filtered data can be displayed in a stick type way in order to see the change of the residual flow with time and through the vertical.

ACKNOWLEDGEMENTS

The authors would like to thank RVS Barry and POL engineers for setting up, deploying and recovering the instruments. The survey on such a large scale and with quick turn around of equipment needed would not have yielded such excellent returns without their effort and it is to their credit. We would also like to thank Steve Loch of BODC for undertaking part of the CALTUX software development.

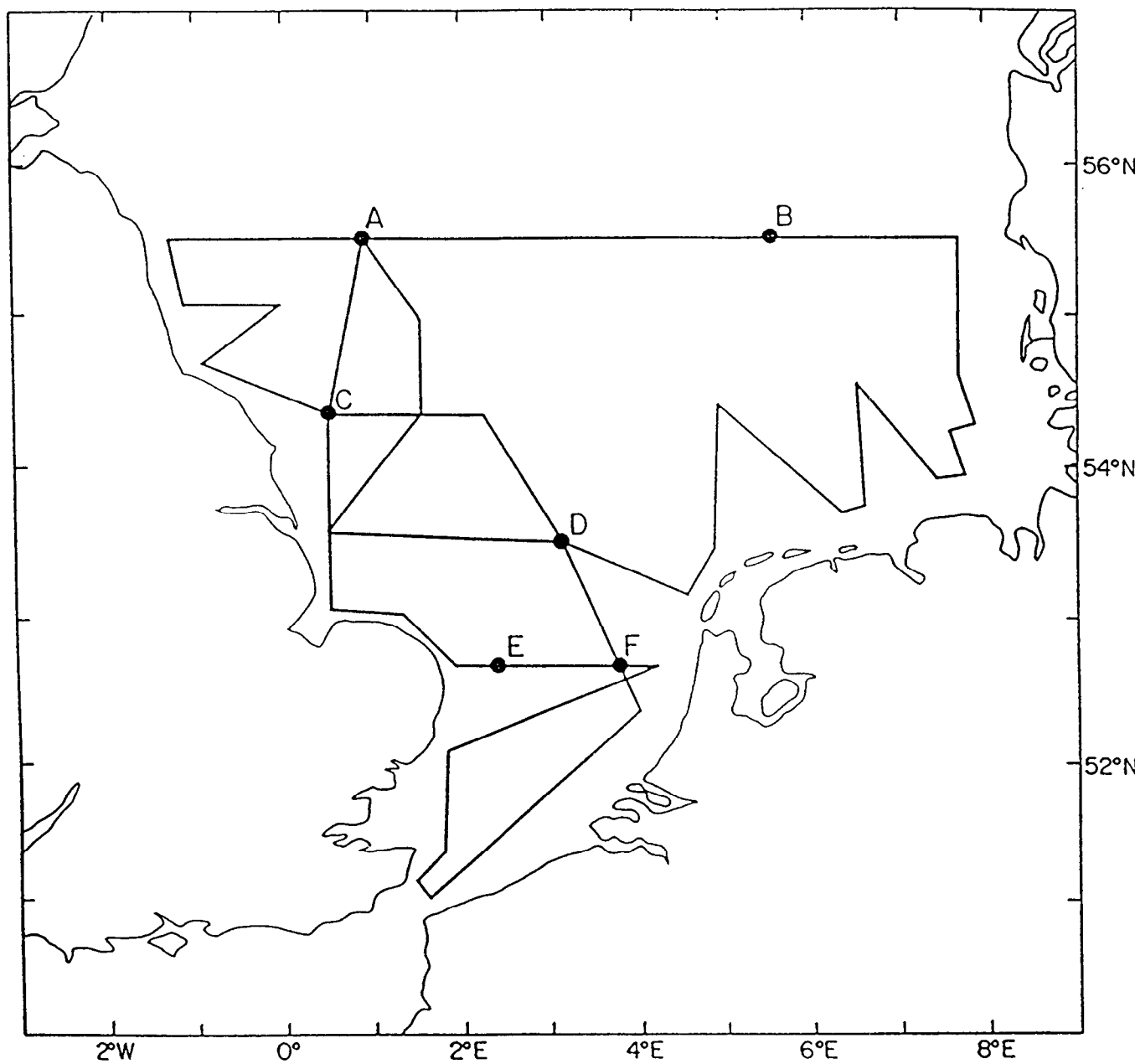


Figure 1. Positions of North Sea Project current meter rigs.

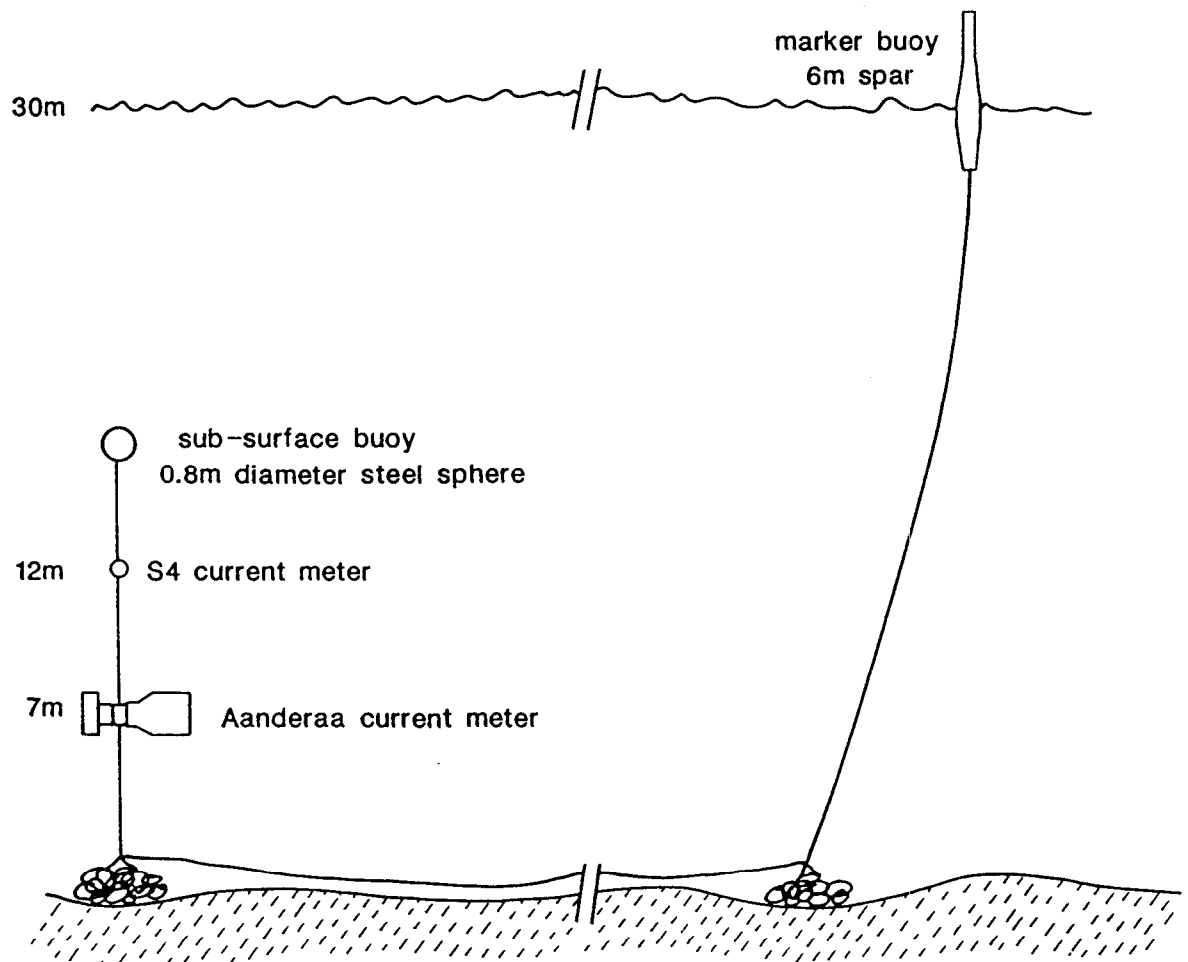


Figure 2. Mooring system schematic description

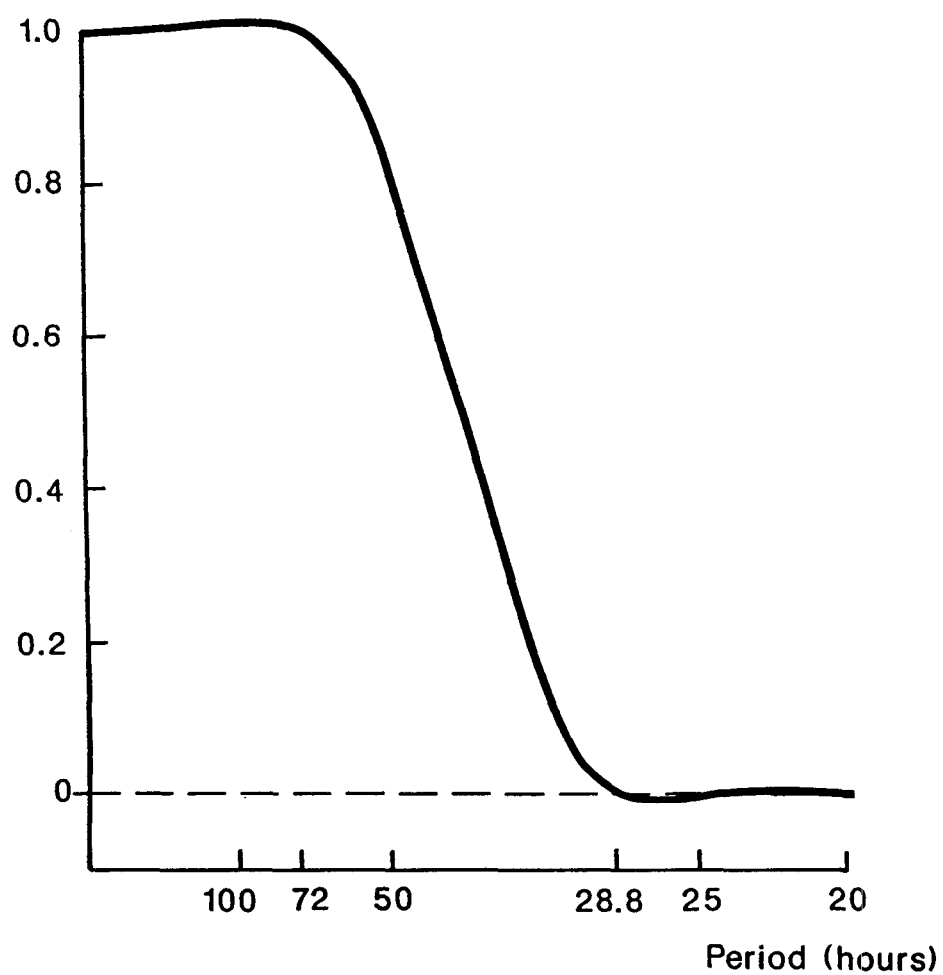


Figure 3. Response of low pass filter.

Rig information details for C33FC

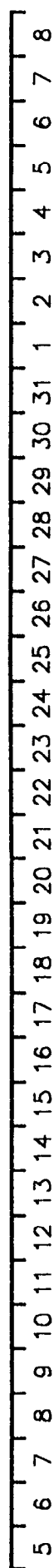
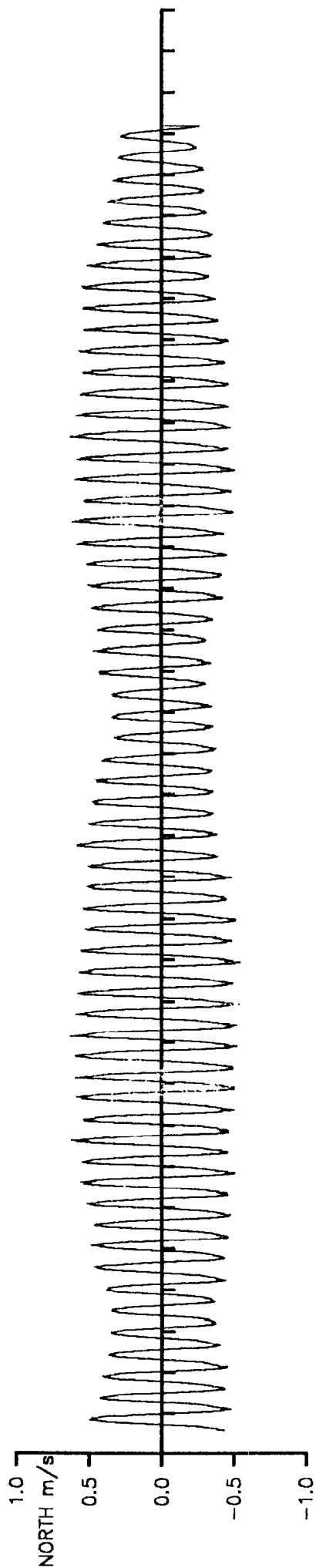
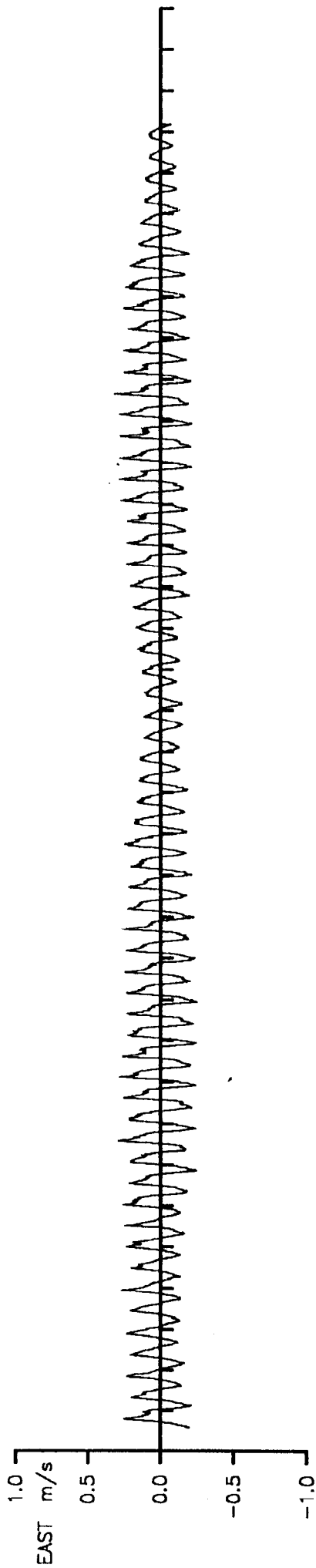
Position Latitude	:	52 36.70N
Position Longitude	:	03 45.20E
Water depth	:	30.0 m
Deployed on cruise	:	C33
Recovered on cruise	:	C35
Site name identification	:	F
Magnetic deviation	:	3.1 degrees west
Rig deployed on	:	05-AUG-88 14:10:00
Rig recovered on	:	06-SEPT-88 04:32:00
Period of deployment	:	31.6 days
Comments	:	Launch and recovery successful

Meter information details for 1117

Rig No	:	C33FC
Meter No	:	1117
Recording interval	:	600.0 seconds
Meter height from bottom	:	12.0 m
Position of meter on rig	:	T
Meter type	:	S4
Meter started	:	04-AUG-88 12:00:00
Meter stopped	:	06-SEPT-88 08:10:00
Period switched on	:	32.8 days
Period of good data	:	31.6 days
Total number of scans	:	4551
Timing error	:	None
Comments	:	Good record obtained

VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 1117 Rig no. C33FC Depth of water(m) 30.0
Start/End 1988/08/05 AT 14:10:00 1988/09/06 AT 04:32:00
Position 52 36.70N 03 45.20E Meter Height(m) 12.0



88

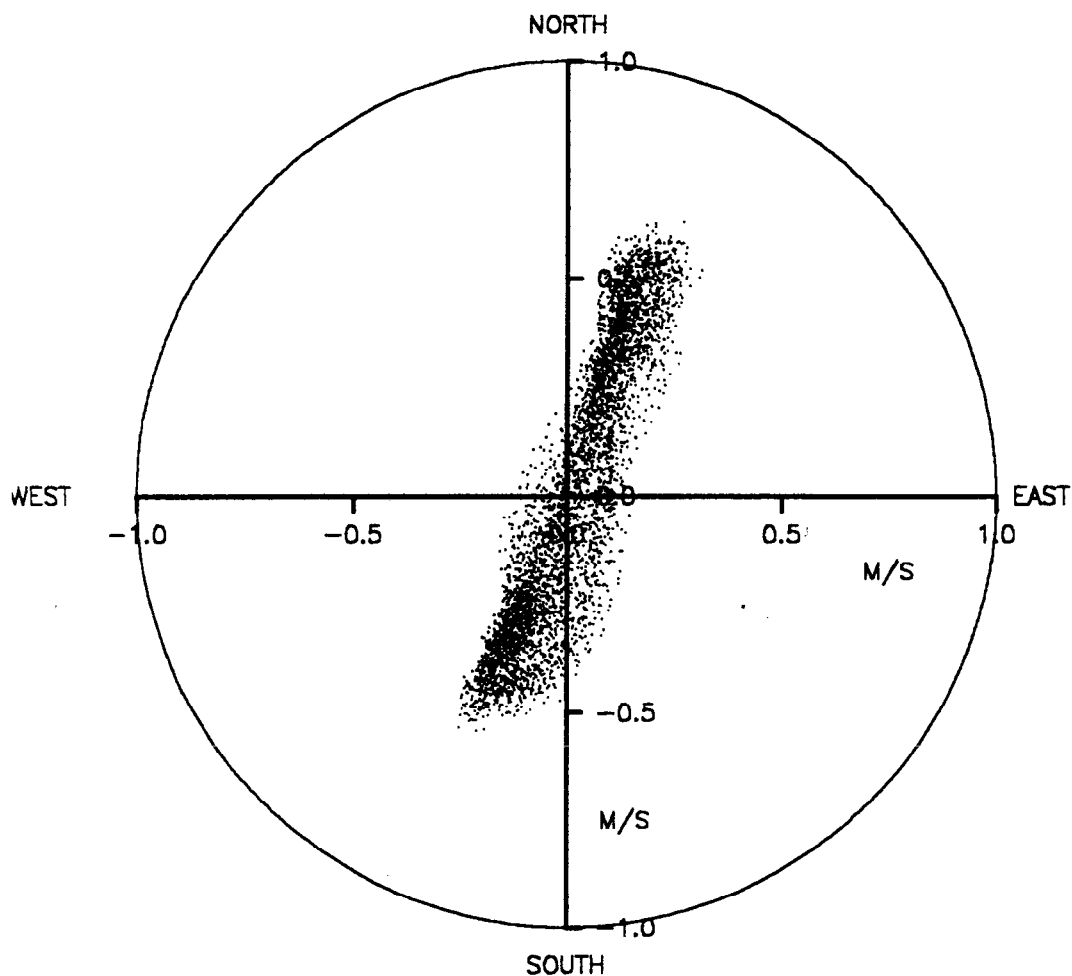
Aug

88

Sep

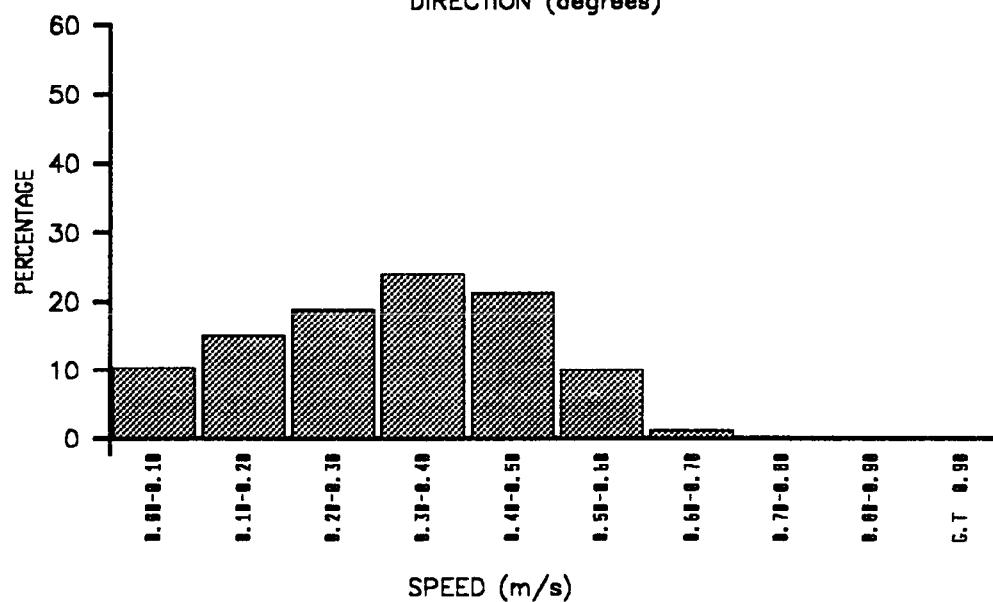
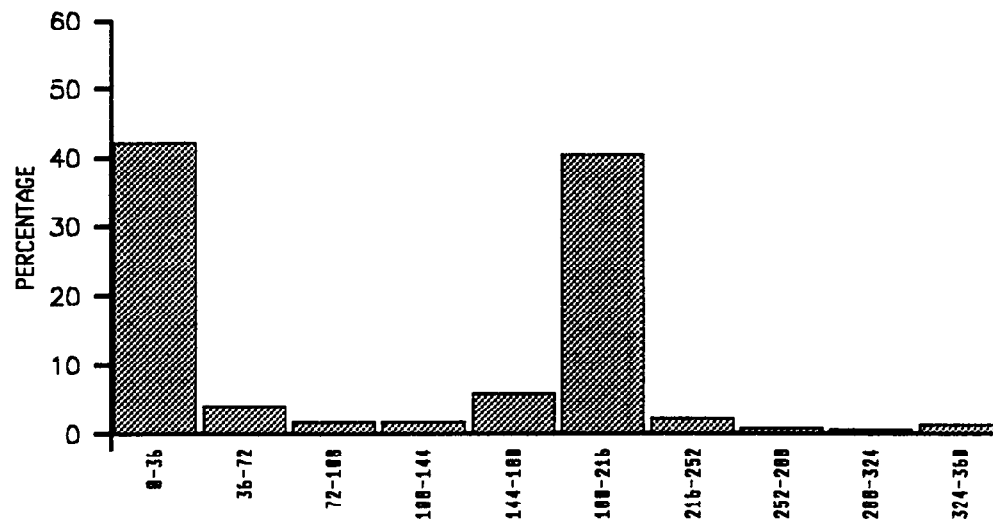
SCATTER PLOT

Meter no. 1117 Rig no. C33FC Depth of water(m) 30.0
 Start/End 1988/08/05 AT 14:10:00 1988/09/06 AT 04:32:00
 Position 52 36.70N 03 45.20E Meter Height(m) 12.0



HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1117 Rig no. C33FC Depth of water(m) 30.0
 Start/End 1988/08/05 AT 14:10:00 1988/09/06 AT 04:32:00
 Position 52 36.70N 03 45.20E Meter Height(m) 12.0

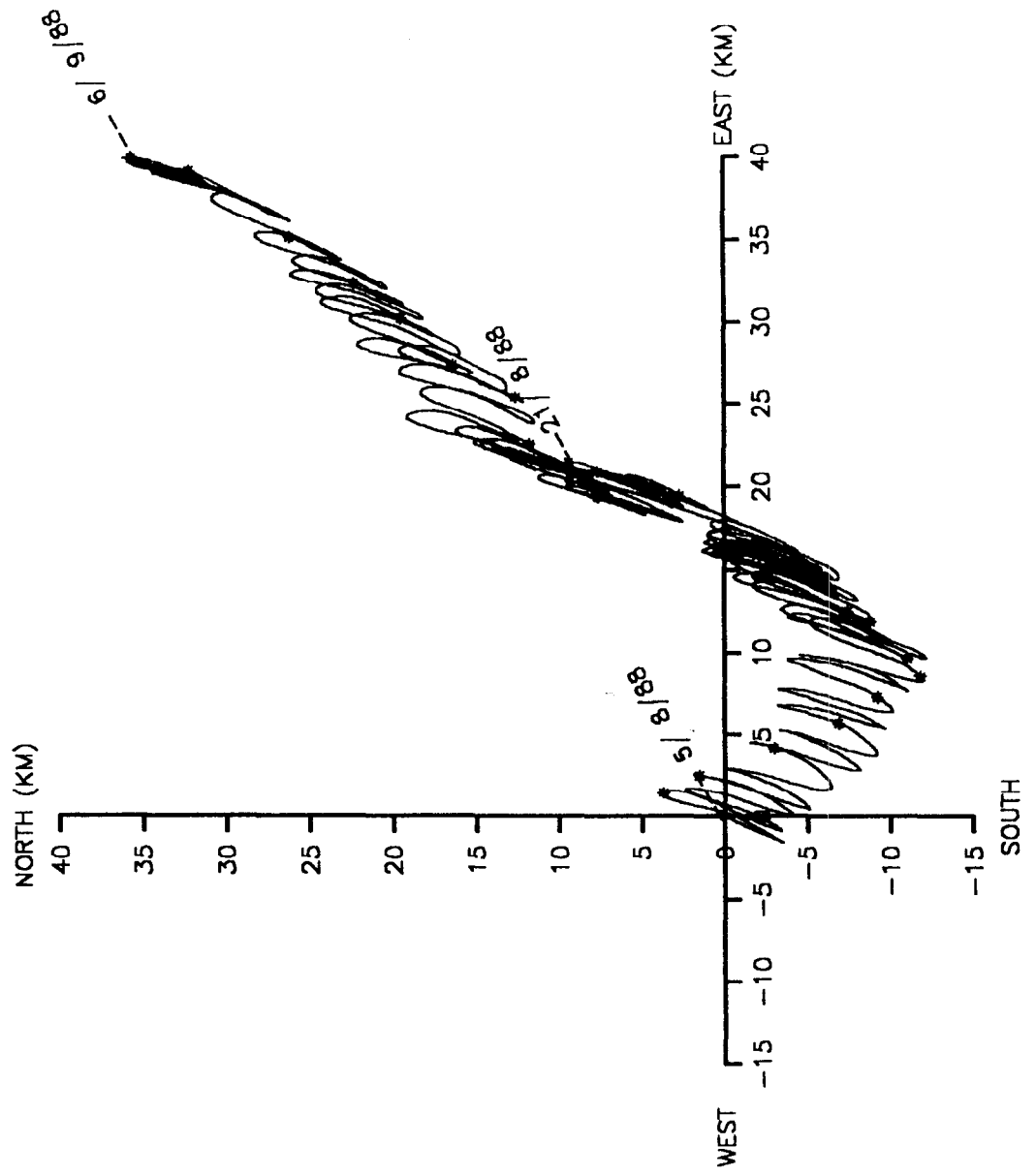


VECTOR PLOT

Meter no. 1117 Rig no. C33FC Depth of water(m) 30.0

Start/End 1988/08/05 AT 14:10:00 1988/09/06 AT 04:32:00

Position 52 36.70N 03 45.20E Meter Height(m) 12.0



STATISTICS FOR S41117T C33FCS A

	Mean	Variance	Standard deviation
Eastings	0.0145	0.15134800E-01	0.12302357E+00
Northings	0.0127	0.10568619E+00	0.32509410E+00
Speed	0.3141	0.22487447E-01	0.14995813E+00

Vector mean speed 0.0193
Vector Mean Direction 48.7

Maximum ten values									
Eastings					Northings				
0.314	0.307	0.286	0.286	0.280	0.630	0.626	0.623	0.620	0.610
0.279	0.277	0.276	0.275	0.272	0.602	0.597	0.596	0.595	0.594

Minimum ten values									
Eastings					Northings				
-0.237	-0.238	-0.238	-0.240	-0.243	-0.507	-0.507	-0.511	-0.517	-0.518
-0.243	-0.244	-0.245	-0.247	-0.251	-0.518	-0.519	-0.534	-0.539	-0.542

Maximum speeds									
0.686	0.659	0.653	0.650	0.642	0.642	0.641	0.641	0.640	0.637
0.637	0.636	0.635	0.632	0.631	0.626	0.626	0.625	0.623	0.622
0.622	0.621	0.620	0.620	0.620	0.620	0.619	0.617	0.616	0.615
0.615	0.614	0.611	0.610	0.609	0.607	0.607	0.606	0.606	0.606
0.605	0.605	0.604	0.604	0.604	0.603	0.603	0.602	0.602	0.600
0.599	0.598	0.598	0.597	0.597	0.596	0.596	0.596	0.595	0.594
0.594	0.594	0.593	0.593	0.593	0.592	0.592	0.592	0.591	0.591
0.591	0.591	0.590	0.590	0.589	0.589	0.588	0.588	0.587	0.587
0.587	0.586	0.586	0.586	0.586	0.586	0.586	0.586	0.585	0.585
0.585	0.584	0.584	0.583	0.583	0.582	0.582	0.581	0.581	0.581

Variance ellipse statistics

Maximum variance 0.1185E+00	Direction	19.4
Minimum variance 0.2358E-02	Direction	109.4
Total variance 0.1208E+00	Ratio of variances	0.1991E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		3.6
Average direction. maxdir +PI/2 to maxdir -PI/2		176.2

STATISTICS FOR S41117T C33FCSF A

	Mean	Variance	Standard deviation
Eastings	0.0154	0.18872108E-03	0.13737582E-01
Northings	0.0165	0.47266250E-03	0.21740798E-01
Speed	0.0294	0.30516949E-03	0.17469101E-01

Vector mean speed 0.0226
 Vector Mean Direction 42.9

Maximum ten values					Northings				
Eastings									
0.048	0.048	0.041	0.041	0.033	0.068	0.066	0.064	0.062	0.061
0.033	0.032	0.031	0.031	0.031	0.060	0.054	0.052	0.051	0.048

Minimum ten values					Northings				
Eastings									
-0.004	-0.005	-0.008	-0.008	-0.010	-0.013	-0.014	-0.015	-0.017	-0.019
-0.010	-0.011	-0.019	-0.020	-0.023	-0.021	-0.021	-0.023	-0.023	-0.025

Maximum speeds									
0.083	0.081	0.074	0.071	0.070	0.068	0.064	0.059	0.056	0.053
0.050	0.046	0.046	0.045	0.044	0.043	0.042	0.041	0.041	0.041
0.041	0.040	0.040	0.039	0.038	0.037	0.036	0.035	0.035	0.034
0.034	0.034	0.034	0.034	0.033	0.033	0.033	0.033	0.033	0.033
0.032	0.032	0.032	0.031	0.031	0.030	0.030	0.030	0.030	0.029
0.029	0.029	0.029	0.029	0.029	0.029	0.027	0.027	0.027	0.027
0.027	0.026	0.025	0.024	0.024	0.024	0.023	0.023	0.022	0.022
0.021	0.020	0.019	0.019	0.019	0.019	0.019	0.018	0.015	0.015
0.013	0.013	0.013	0.012	0.012	0.011	0.010	0.010	0.010	0.009
0.009	0.009	0.008	0.008	0.005	0.005	0.005	0.005	0.004	0.004

Variance ellipse statistics

Maximum variance 0.5314E-03	Direction	22.5
Minimum variance 0.1300E-03	Direction	112.5
Total variance 0.6614E-03	Ratio of variances	0.2446E+00
Average direction. maxdir -PI/2 to maxdir +PI/2		19.5
Average direction. maxdir +PI/2 to maxdir -PI/2		172.0

Meter information details for 9348

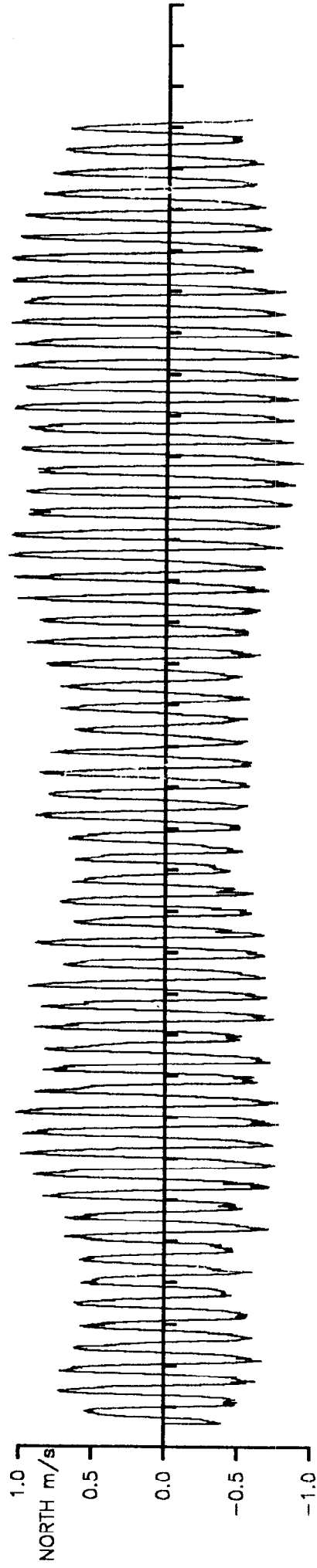
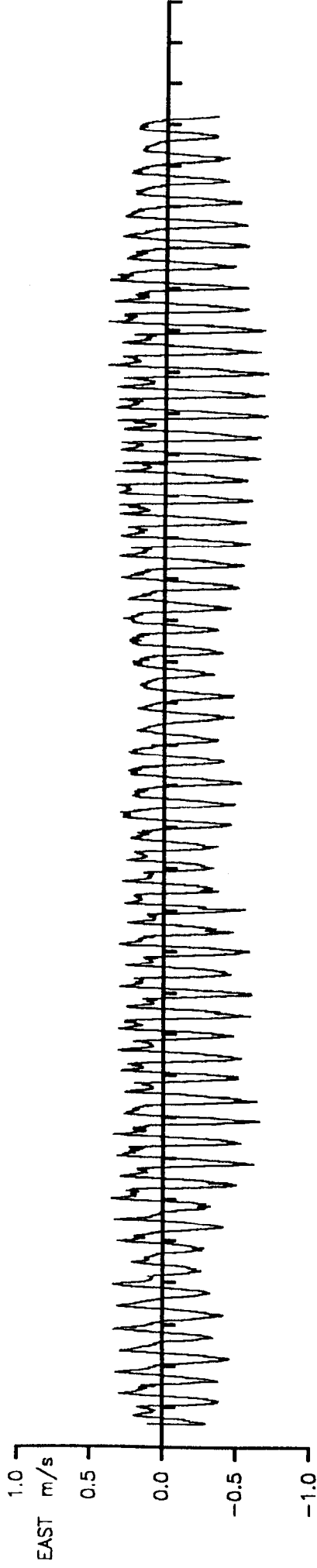
Rig No	:	C33FC
Meter No	:	9348
Recording interval	:	600.0 seconds
Meter height from bottom	:	7.0 m
Position of meter on rig	:	B
Meter type	:	AS
Meter started	:	05-AUG-88 10:41:00
Meter stopped	:	06-SEPT-88 05:31:00
Period switched on	:	31.8 days
Period of good data	:	31.6 days
Total number of scans	:	4551
Timing error	:	None
Comments	:	On this deployment the meter gave North and East components larger than expected when compared to the S4 above

VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 9348 Rig no. C33FC Depth of water(m) 30.0

Start/End 1988/08/05 AT 14:10:00 1988/09/06 AT 04:32:00

Position 52 36.70N 03 45.20E Meter Height(m) 7.0



5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8

88

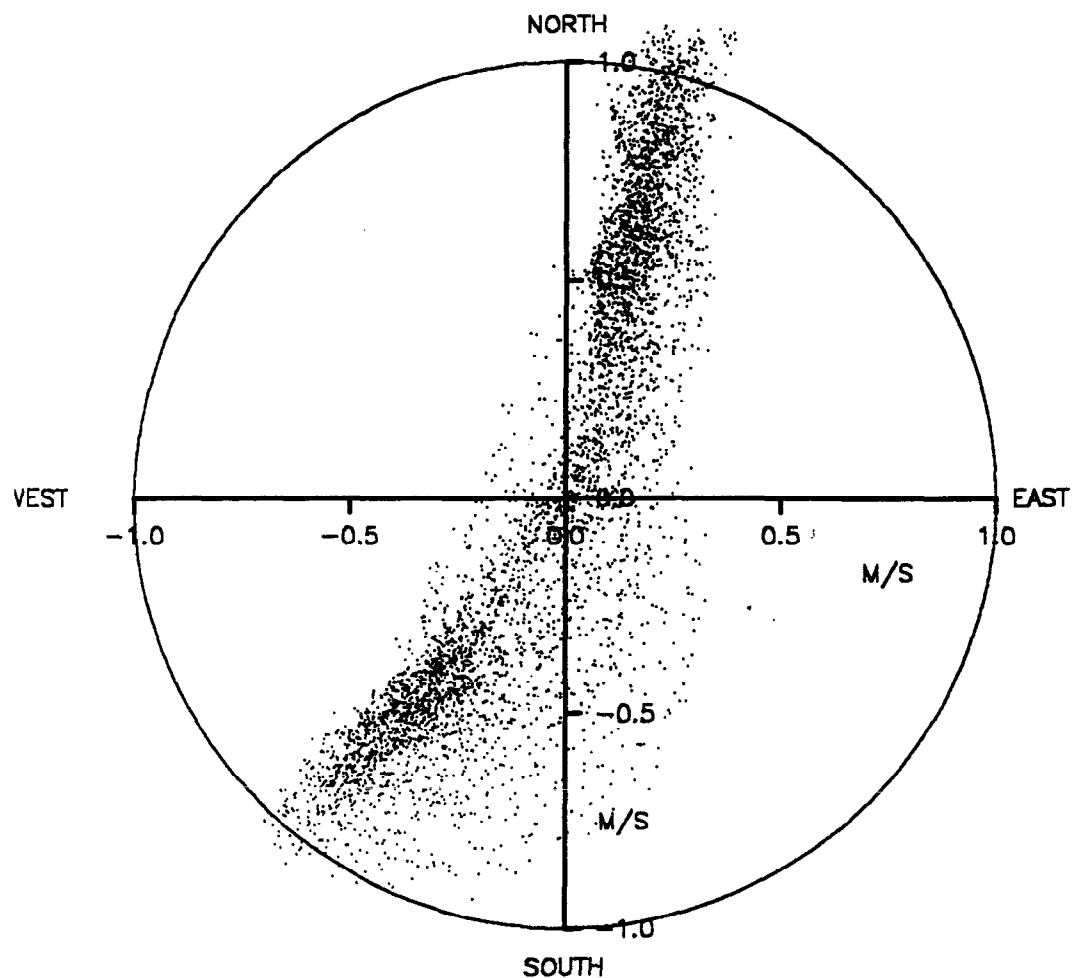
88

Aug

Sep

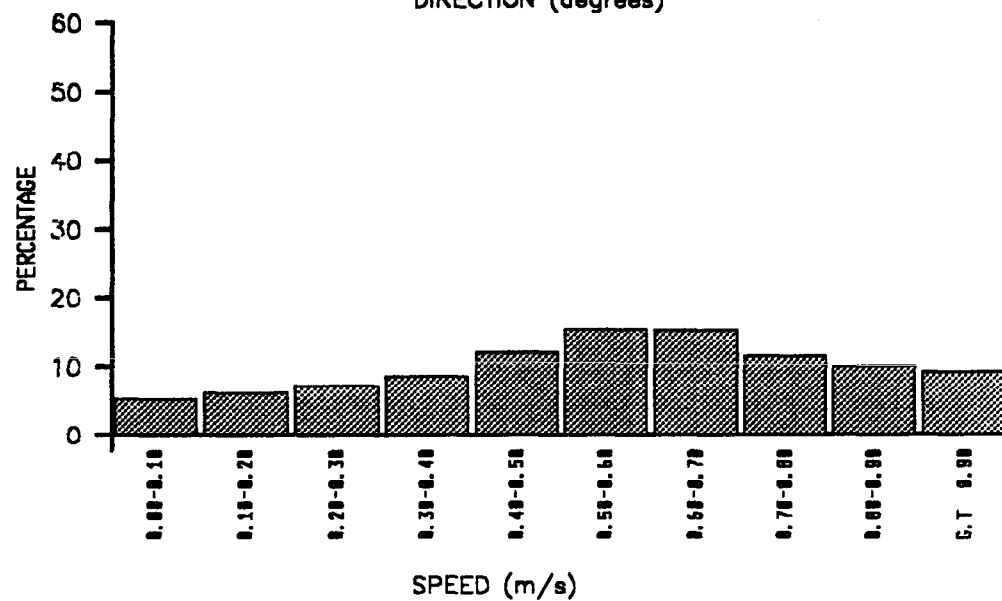
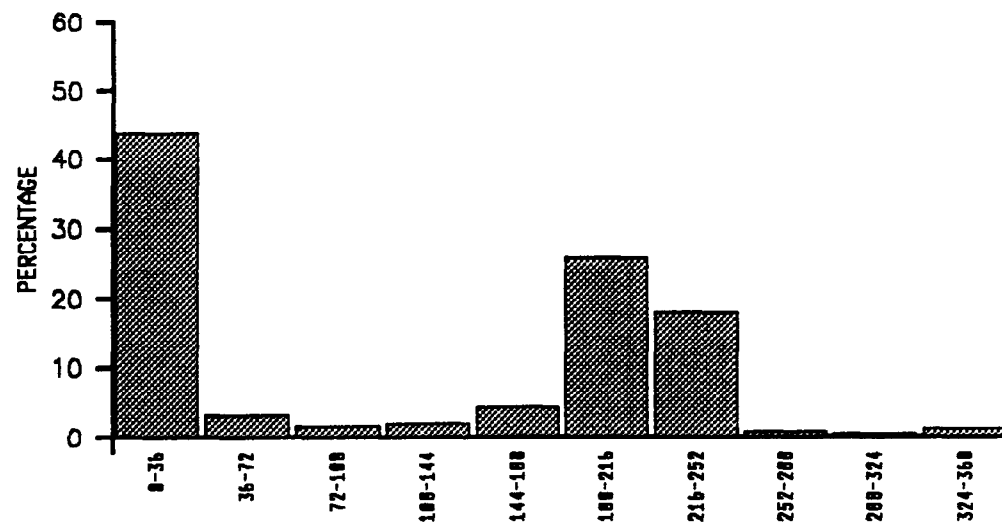
SCATTER PLOT

Meter no. 9348 Rig no. C33FC Depth of water(m) 30.0
 Start/End 1988/08/05 AT 14:10:00 1988/09/06 AT 04:32:00
 Position 52 36.70N 03 45.20E Meter Height(m) 7.0



HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 9348 Rig no. C33FC Depth of water(m) 30.0
 Start/End 1988/08/05 AT 14:10:00 1988/09/06 AT 04:32:00
 Position 52 36.70N 03 45.20E Meter Height(m) 7.0

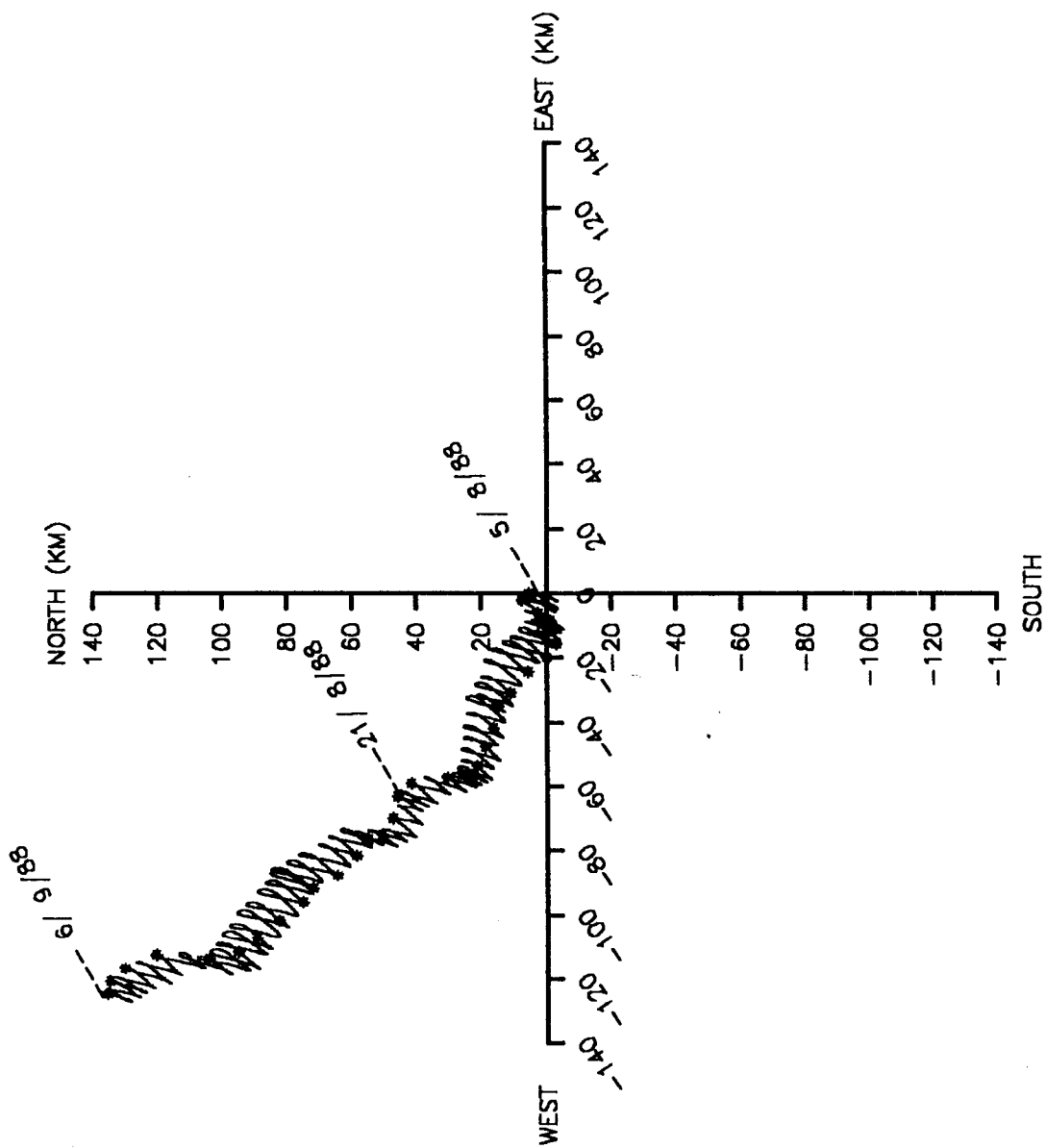


VECTOR PLOT

Meter no. 9348 Rlg no. C33FC Depth of water(m) 30.0

Start/End 1988/08/05 AT 14:10:00 1988/09/06 AT 04:32:00

Position 52 36.70N 03 45.20E Meter Height(m) 7.0

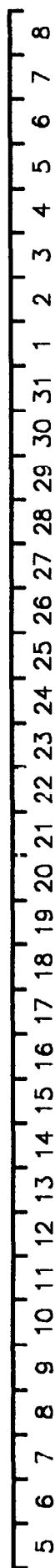
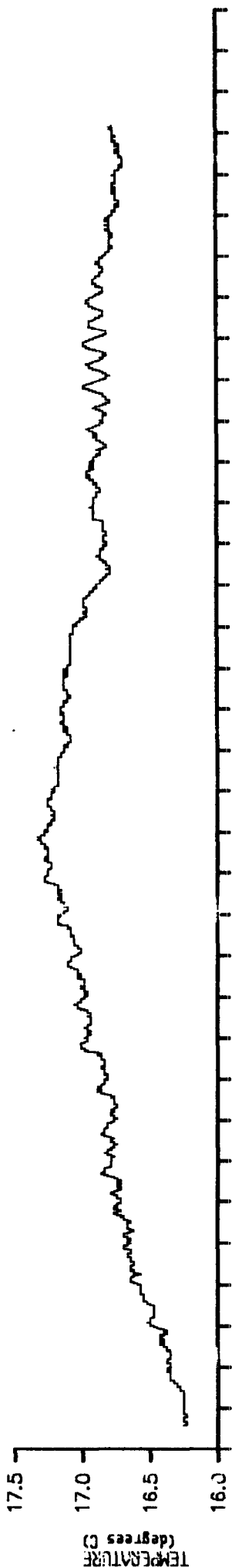
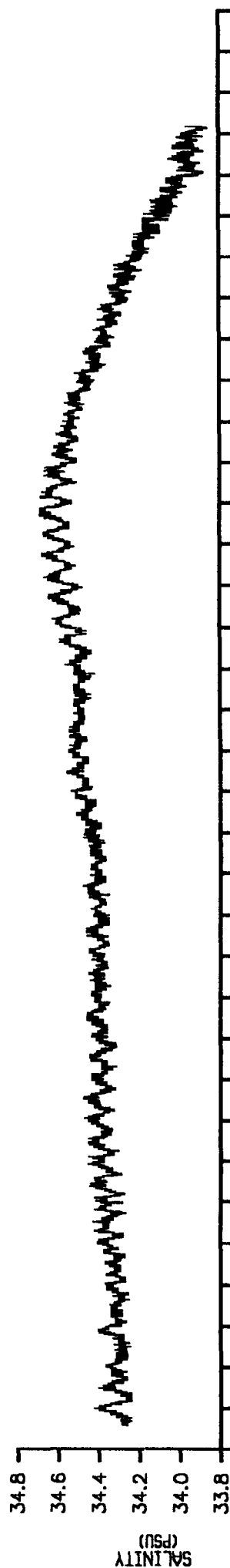
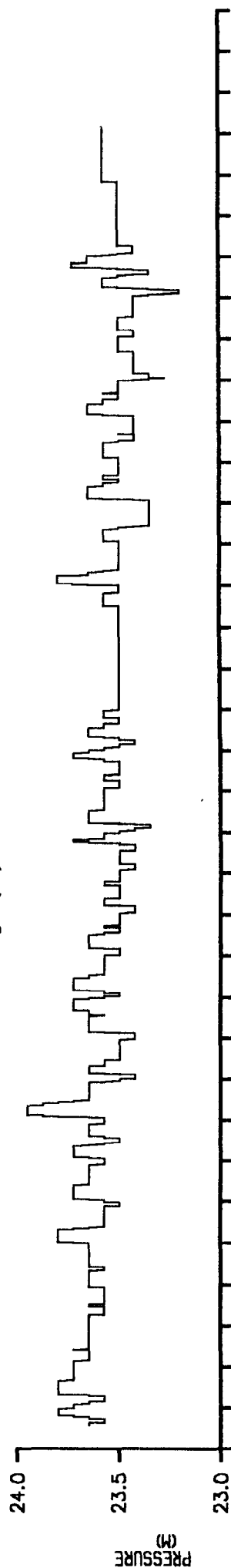


TEMPERATURE, SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9348 Rig no. C33FC Depth of water(m) 30.0

Start/End 1988/08/05 AT 14:10:00 1988/09/06 AT 04:32:00

Position 52 36.70N 03 45.20E Meter Height(m) 7.0



88

Aug

88

Sep

STATISTICS FOR AS9348B C33FCS A

	Mean	Variance	Standard deviation
Eastings	-0.0459	0.64949751E-01	0.25485241E+00
Northings	0.0494	0.30624157E+00	0.55339092E+00
Speed	0.5568	0.65677762E-01	0.25627685E+00

Vector mean speed 0.0674
 Vector Mean Direction -42.9

Maximum ten values									
Eastings					Northings				
0.391	0.390	0.381	0.380	0.380	1.082	1.074	1.072	1.070	1.066
0.378	0.372	0.369	0.368	0.365	1.064	1.064	1.061	1.061	1.058

Minimum ten values									
Eastings					Northings				
-0.658	-0.659	-0.662	-0.662	-0.662	-0.873	-0.876	-0.877	-0.880	-0.886
-0.671	-0.674	-0.674	-0.694	-0.697	-0.894	-0.895	-0.898	-0.905	-0.932

Maximum speeds									
1.133	1.130	1.124	1.118	1.118	1.118	1.112	1.107	1.107	1.101
1.098	1.095	1.095	1.092	1.089	1.086	1.086	1.086	1.086	1.086
1.086	1.083	1.080	1.078	1.075	1.075	1.072	1.072	1.072	1.072
1.069	1.069	1.069	1.066	1.066	1.066	1.066	1.066	1.063	1.060
1.060	1.057	1.057	1.057	1.057	1.057	1.054	1.048	1.048	1.048
1.048	1.048	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.043
1.043	1.040	1.040	1.040	1.040	1.037	1.037	1.037	1.037	1.034
1.034	1.034	1.034	1.034	1.031	1.031	1.031	1.031	1.028	1.028
1.028	1.028	1.028	1.028	1.028	1.025	1.025	1.025	1.025	1.025
1.022	1.022	1.022	1.022	1.022	1.022	1.022	1.022	1.022	1.022

Variance ellipse statistics

Maximum variance 0.3570E+00	Direction	22.6
Minimum variance 0.1417E-01	Direction	112.6
Total variance 0.3712E+00	Ratio of variances	0.3968E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		-2.9
Average direction. maxdir +PI/2 to maxdir -PI/2		183.5

STATISTICS FOR AS9348B C33FCSF A

	Mean	Variance	Standard deviation
Eastings	-0.0481	0.78526186E-03	0.28022528E-01
Northings	0.0536	0.15444374E-02	0.39299335E-01
Speed	0.0805	0.10282537E-02	0.32066390E-01

Vector mean speed 0.0720
 Vector Mean Direction -41.9

Maximum ten values									
Eastings					Northings				
0.014	0.011	0.005	0.003	0.003	0.178	0.174	0.161	0.151	0.133
0.001	-0.002	-0.006	-0.006	-0.007	0.117	0.115	0.114	0.108	0.106

Minimum ten values									
Eastings					Northings				
-0.086	-0.086	-0.086	-0.086	-0.092	0.012	0.010	0.010	0.009	0.008
-0.092	-0.094	-0.095	-0.096	-0.097	0.006	0.005	-0.003	-0.003	-0.004

Maximum speeds									
0.178	0.175	0.162	0.151	0.138	0.123	0.120	0.120	0.118	0.117
0.117	0.113	0.111	0.107	0.106	0.105	0.105	0.105	0.104	0.103
0.102	0.102	0.101	0.099	0.097	0.097	0.096	0.096	0.096	0.095
0.095	0.094	0.094	0.094	0.093	0.092	0.091	0.090	0.090	0.089
0.089	0.088	0.088	0.087	0.087	0.087	0.087	0.086	0.085	0.084
0.084	0.083	0.083	0.083	0.082	0.082	0.082	0.081	0.080	0.079
0.079	0.079	0.078	0.078	0.078	0.077	0.077	0.073	0.072	0.072
0.069	0.068	0.063	0.063	0.061	0.060	0.059	0.057	0.057	0.055
0.054	0.053	0.052	0.050	0.048	0.045	0.044	0.043	0.042	0.042
0.036	0.035	0.035	0.035	0.033	0.031	0.030	0.026	0.025	0.025

Variance ellipse statistics

Maximum variance 0.1733E-02	Direction	24.1
Minimum variance 0.5963E-03	Direction	114.1
Total variance 0.2330E-02	Ratio of variances	0.3440E+00
Average direction. maxdir -PI/2 to maxdir +PI/2		-58.8
Average direction. maxdir +PI/2 to maxdir -PI/2		256.9

STICK TIME SERIES PLOT

Rig no. C33FC Depth of water(m) 30.0

Start/End 1988/08/05 AT 14:10:00 1988/09/06 AT 04:32:00

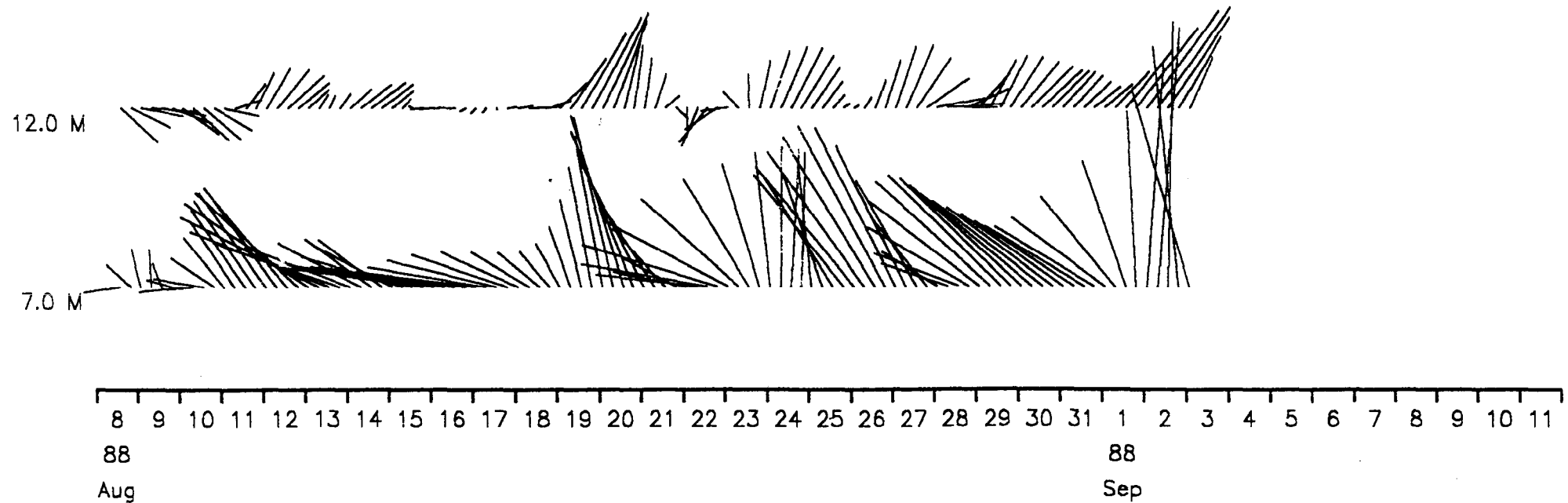
Position 52 36.70N 03 45.20E

Filtered Series Scale 0.1 m/s

Meter No. Meter Height

9348 7.0 M

1117 12.0 M



Rig information details for C35FC

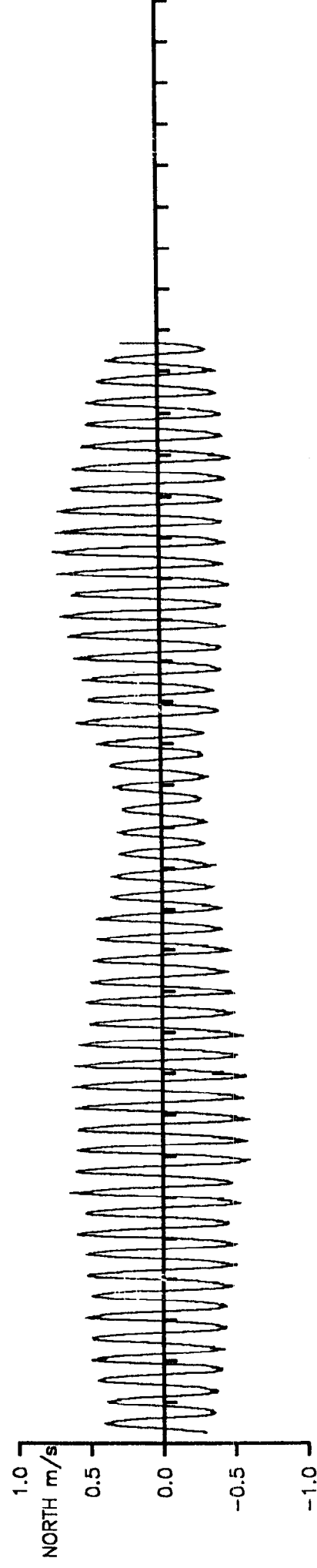
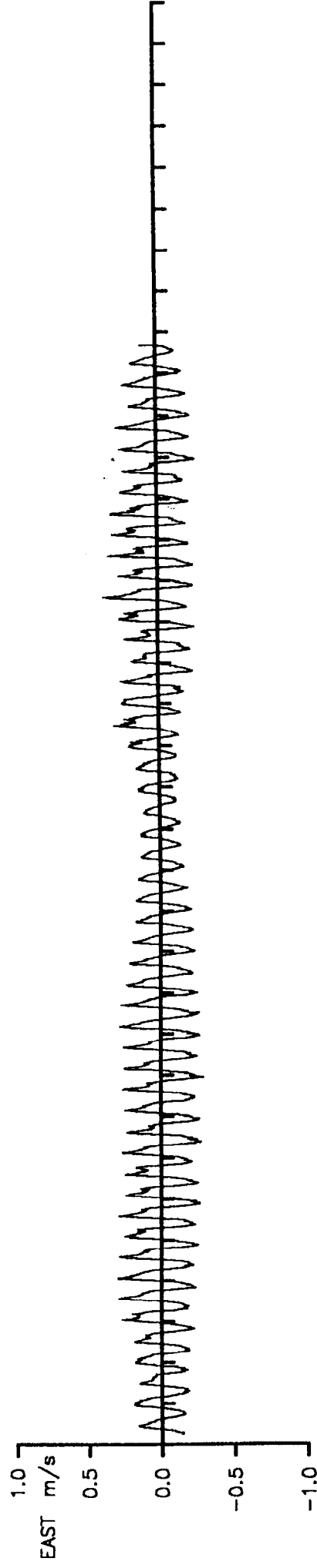
Position Latitude	:	52 36.50N
Position Longitude	:	03 45.20E
Water depth	:	30.0 m
Deployed on cruise	:	C35
Recovered on cruise	:	C37
Site name identification	:	F
Magnetic deviation	:	3.1 degrees west
Rig deployed on	:	06-SEPT-88 06:23:00
Rig recovered on	:	02-OCT-88 16:40:00
Period of deployment	:	26.4 days
Comments	:	Launch and recovery successful

Meter information details for 1121

Rig No	:	C35FC
Meter No	:	1121
Recording interval	:	600.0 seconds
Meter height from bottom	:	12.0 m
Position of meter on rig	:	T
Meter type	:	S4
Meter started	:	06-SEPT-88 05:00:00
Meter stopped	:	03-OCT-88 18:00:00
Period switched on	:	27.5 days
Period of good data	:	26.4 days
Total number of scans	:	3806
Timing error	:	None
Comments	:	Good record obtained

VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 1121 Rig no. C35FC Depth of water(m) 30.0
Start/End 1988/09/06 AT 06:23:00 1988/10/02 AT 16:40:00
Position 52 36.50N 03 45.20E Meter Height(m) 12.0

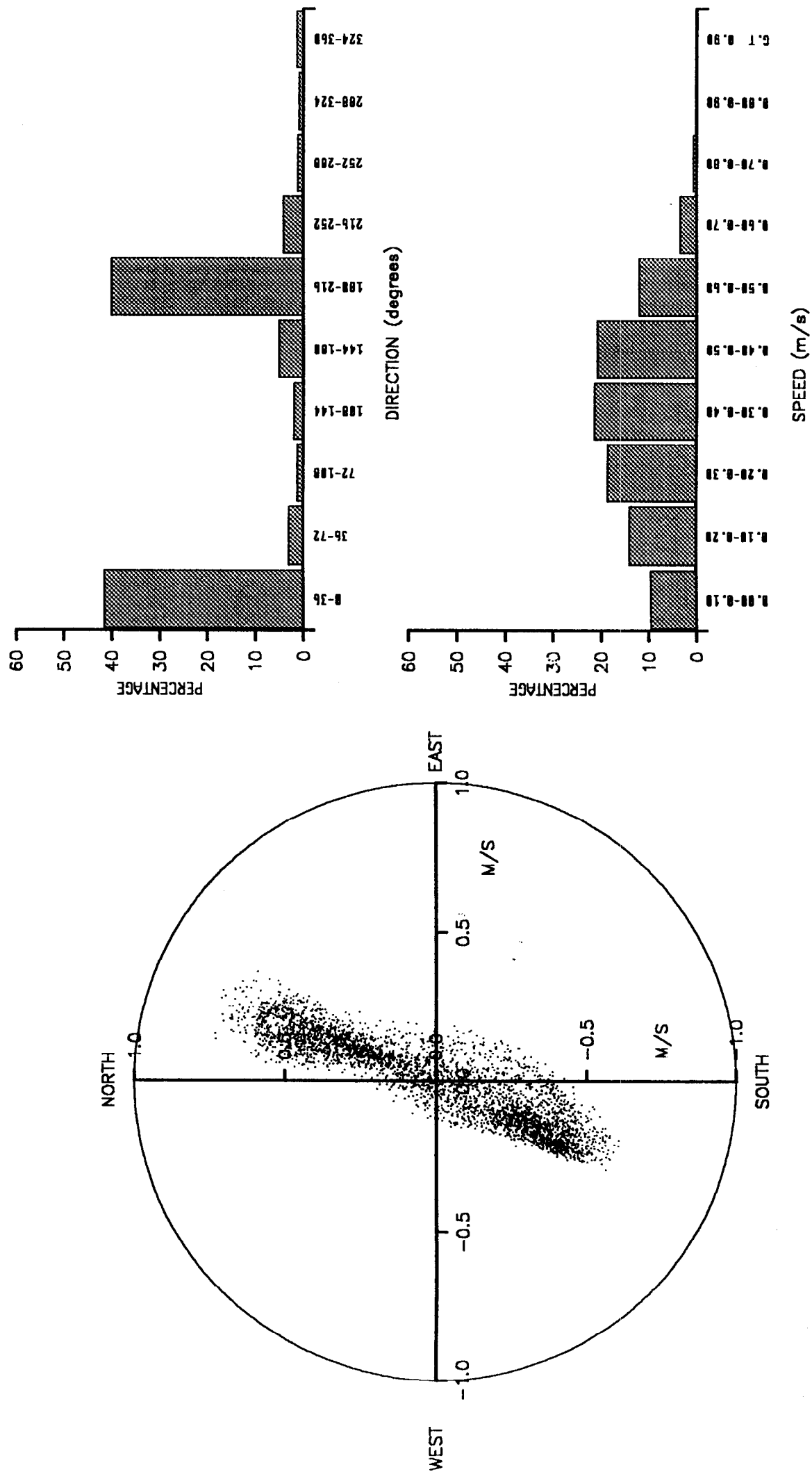


SCATTER PLOT

Meter no. 1121 Rig no. C35FC Depth of water(m) 30.0
 Start/End 1988/09/06 AT 06:23:00 1988/10/02 AT 16:40:00
 Position 52 36.50N 03 45.20E Meter Height(m) 12.0

HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1121 Rig no. C35FC Depth of water(m) 30.0
 Start/End 1988/09/06 AT 06:23:00 1988/10/02 AT 16:40:00
 Position 52 36.50N 03 45.20E Meter Height(m) 12.0

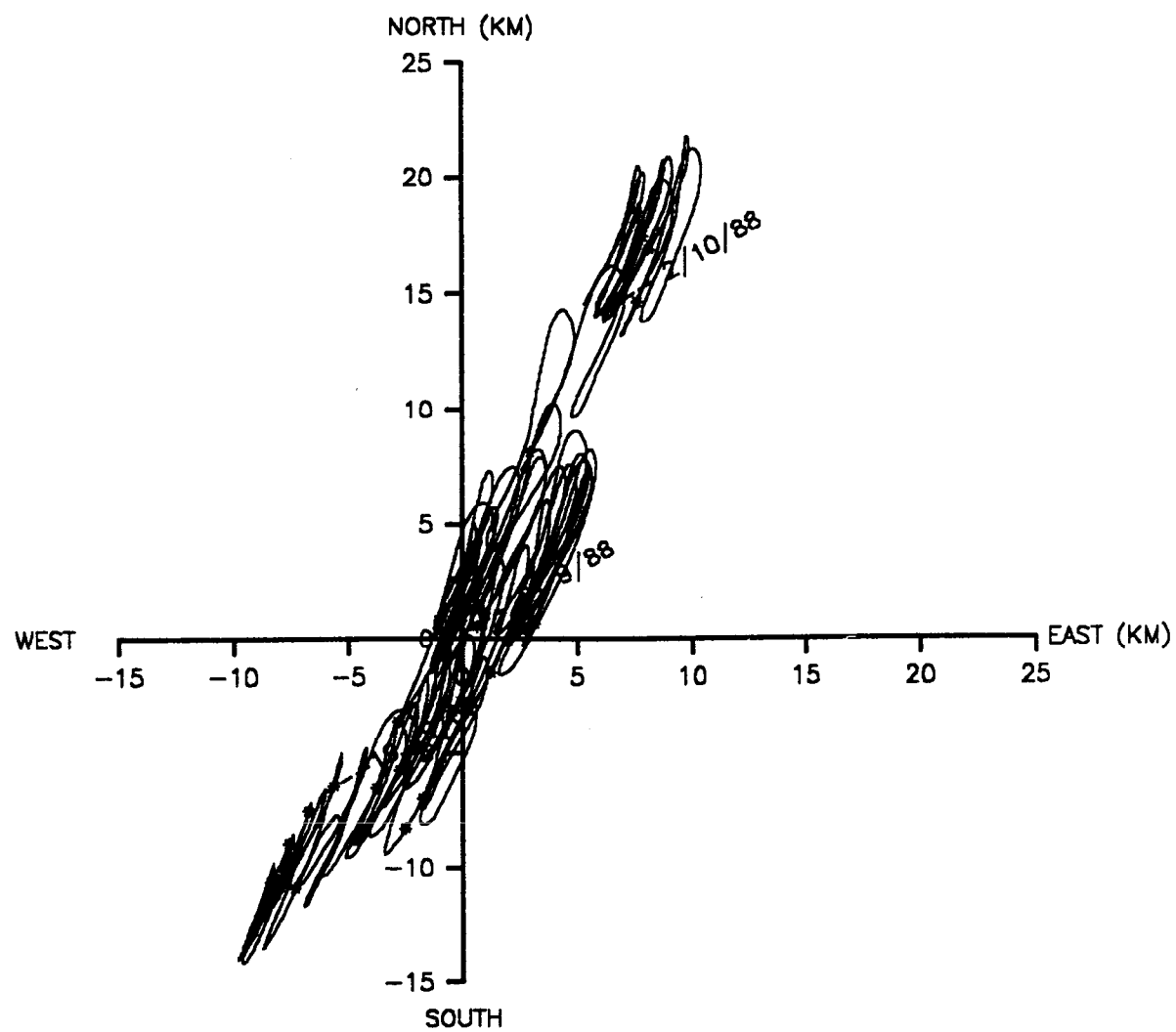


VECTOR PLOT

Meter no. 1121 Rig no. C35FC Depth of water(m) 30.0

Start/End 1988/09/06 AT 06:23:00 1988/10/02 AT 16:40:00

Position 52 36.50N 03 45.20E Meter Height(m) 12.0



STATISTICS FOR S41121T C35FCS A

	Mean	Variance	Standard deviation
Eastings	0.0027	0.20447031E-01	0.14299309E+00
Northings	0.0061	0.11604321E+00	0.34065121E+00
Speed	0.3329	0.25650632E-01	0.16015804E+00

Vector mean speed 0.0067

Vector Mean Direction 24.2

Maximum ten values

Eastings

Northings

0.367	0.341	0.336	0.336	0.334	0.730	0.729	0.708	0.705	0.702
0.334	0.323	0.315	0.311	0.311	0.701	0.695	0.683	0.680	0.676

Minimum ten values

Eastings

Northings

-0.262	-0.262	-0.263	-0.263	-0.265	-0.571	-0.573	-0.575	-0.575	-0.577
-0.266	-0.268	-0.269	-0.275	-0.294	-0.577	-0.588	-0.592	-0.604	-0.605

Maximum speeds

0.765	0.761	0.751	0.747	0.742	0.740	0.733	0.730	0.729	0.727
0.719	0.719	0.718	0.716	0.712	0.710	0.707	0.706	0.705	0.703
0.702	0.701	0.698	0.698	0.698	0.697	0.694	0.690	0.690	0.690
0.687	0.685	0.685	0.684	0.683	0.683	0.681	0.679	0.673	0.673
0.670	0.670	0.667	0.666	0.665	0.665	0.664	0.664	0.663	0.657
0.654	0.654	0.650	0.650	0.649	0.648	0.647	0.646	0.643	0.642
0.641	0.640	0.636	0.636	0.635	0.635	0.633	0.633	0.633	0.632
0.632	0.632	0.631	0.628	0.628	0.628	0.625	0.625	0.624	0.624
0.624	0.623	0.623	0.623	0.621	0.621	0.621	0.620	0.619	0.619
0.619	0.619	0.619	0.619	0.618	0.618	0.618	0.618	0.618	0.617

Variance ellipse statistics

Maximum variance 0.1334E+00

Direction 21.4

Minimum variance 0.3120E-02

Direction 111.4

Total variance 0.1365E+00

Ratio of variances 0.2339E-01

Average direction. maxdir -PI/2 to maxdir +PI/2

1.2

Average direction. maxdir +PI/2 to maxdir -PI/2

178.9

STATISTICS FOR S41121T C35FCSF A

	Mean	Variance	Standard deviation
Eastings	0.0047	0.67972345E-03	0.26071507E-01
Northings	0.0078	0.10969022E-02	0.33119515E-01
Speed	0.0355	0.58213645E-03	0.24127509E-01

Vector mean speed 0.0091
 Vector Mean Direction 31.1

Maximum ten values									
Eastings					Northings				
0.072	0.071	0.061	0.057	0.056	0.071	0.071	0.069	0.068	0.068
0.052	0.050	0.045	0.045	0.042	0.066	0.065	0.062	0.061	0.060

Minimum ten values									
Eastings					Northings				
-0.021	-0.023	-0.023	-0.025	-0.026	-0.026	-0.027	-0.028	-0.028	-0.029
-0.027	-0.027	-0.028	-0.031	-0.031	-0.030	-0.034	-0.034	-0.038	-0.039

Maximum speeds									
0.093	0.087	0.086	0.086	0.085	0.081	0.078	0.076	0.075	0.074
0.070	0.069	0.068	0.066	0.066	0.062	0.060	0.060	0.057	0.054
0.049	0.046	0.046	0.043	0.043	0.042	0.040	0.037	0.035	0.035
0.034	0.034	0.033	0.033	0.033	0.032	0.032	0.032	0.031	0.030
0.029	0.029	0.026	0.026	0.026	0.025	0.024	0.024	0.024	0.023
0.023	0.023	0.022	0.022	0.022	0.021	0.021	0.021	0.020	0.020
0.019	0.019	0.019	0.018	0.016	0.016	0.013	0.013	0.013	0.012
0.012	0.012	0.010	0.009	0.008	0.008	0.007	0.007	0.006	0.005
0.004	0.003								

Variance ellipse statistics

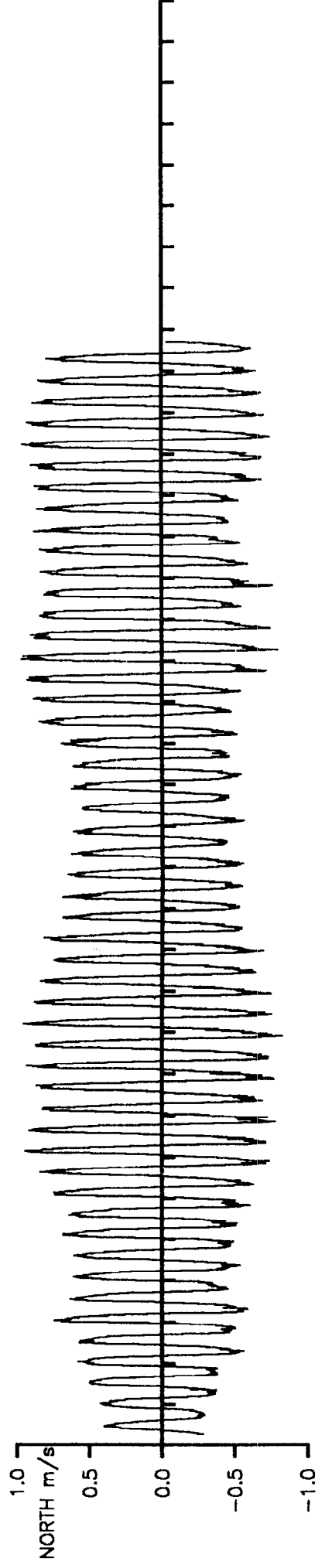
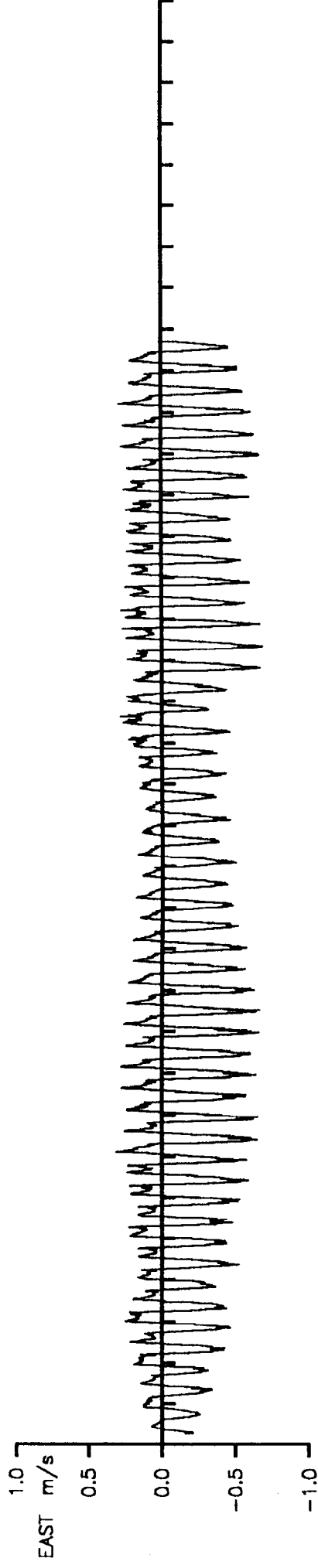
Maximum variance 0.1605E-02	Direction	36.5
Minimum variance 0.1716E-03	Direction	126.5
Total variance 0.1777E-02	Ratio of variances	0.1069E+00
Average direction. maxdir -PI/2 to maxdir +PI/2		2.2
Average direction. maxdir +PI/2 to maxdir -PI/2		177.2

Meter information details for 9348

Rig No	:	C35FC
Meter No	:	9348
Recording interval	:	600.0 seconds
Meter height from bottom	:	7.0 m
Position of meter on rig	:	B
Meter type	:	AS
Meter started	:	06-SEPT-88 05:37:00
Meter stopped	:	03-OCT-88 15:07:00
Period switched on	:	27.4 days
Period of good data	:	26.4 days
Total number of scans	:	3806
Timing error	:	None
Comments	:	On this deployment the meter gave North and East components larger than expected when compared to the S4 above Pressure sensor indicates some instability on 13-SEPT-88 and 23/24-SEPT-88

VELOCITY COMPONENT TIME SERIES PLOT

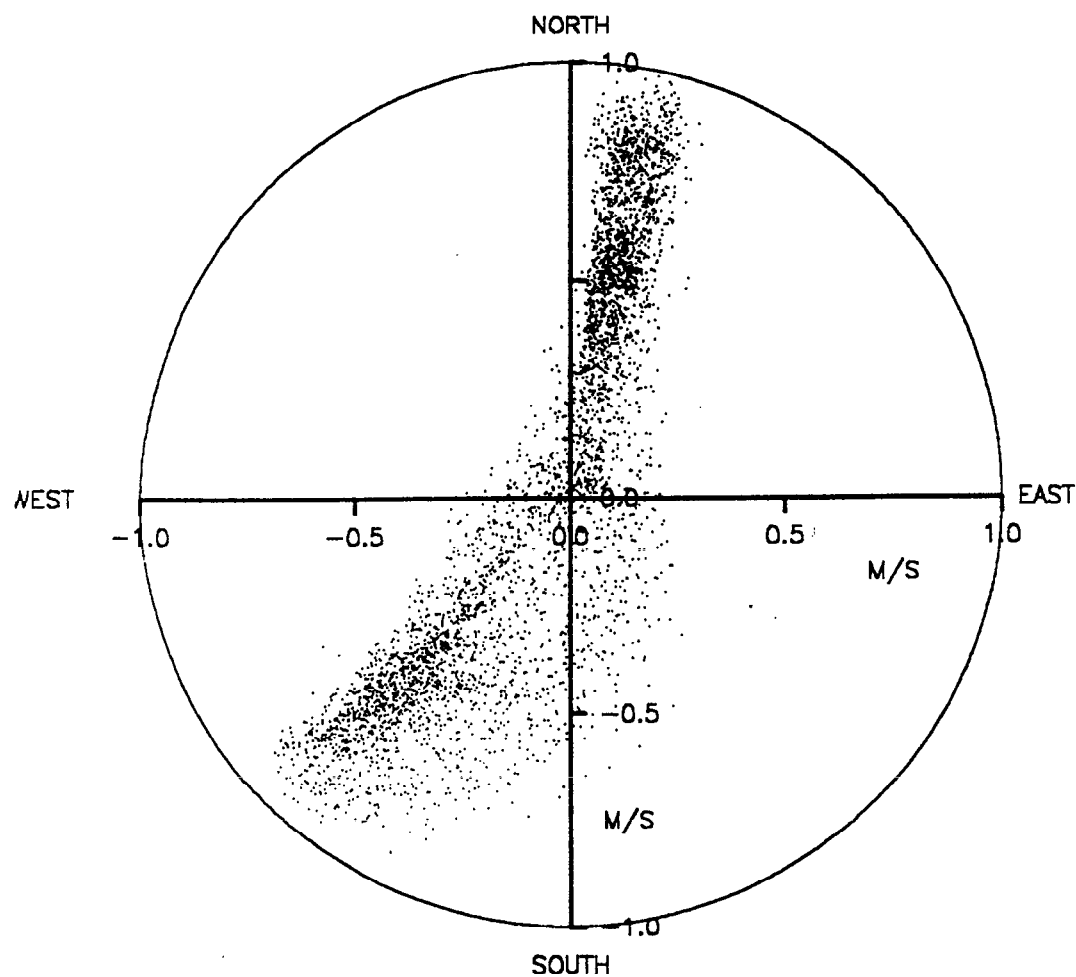
Meter no. 9348 Rig no. C35FC Depth of water(m) 30.0
Start/End 1988/09/06 AT 06:23:00 1988/10/02 AT 16:40:00
Position 52 36.50N 03 45.20E Meter Height(m) 7.0



6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6 7 8 9 10

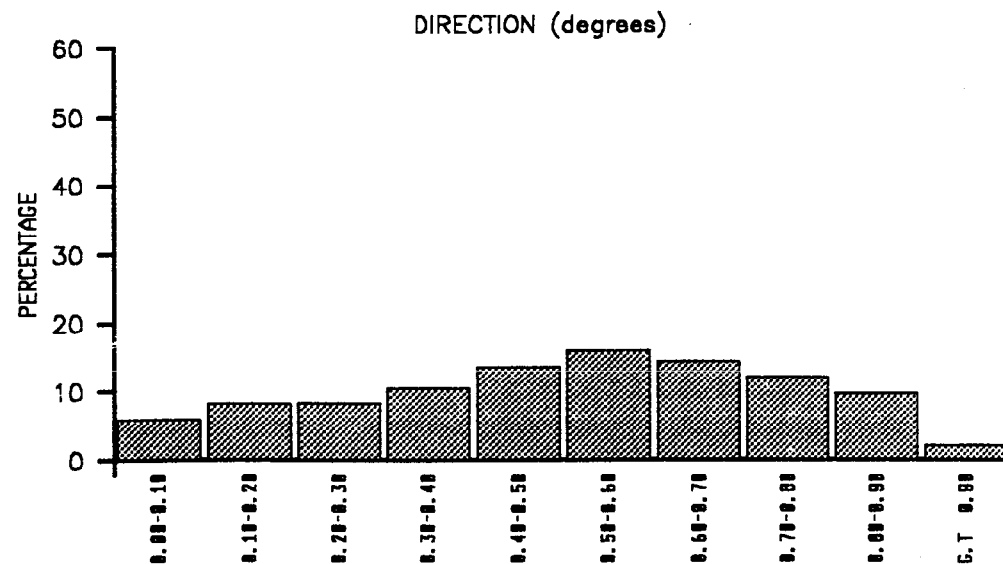
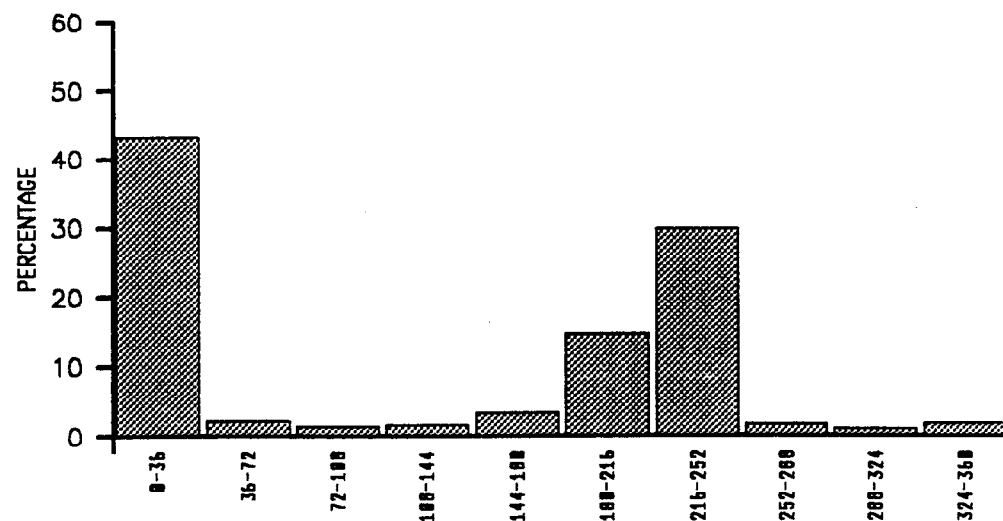
SCATTER PLOT

Meter no. 9348 Rig no. C35FC Depth of water(m) 30.0
 Start/End 1988/09/06 AT 06:23:00 1988/10/02 AT 16:40:00
 Position 52 36.50N 03 45.20E Meter Height(m) 7.0



HISTOGRAMS FOR SPEEDS AND DIRECTIONS

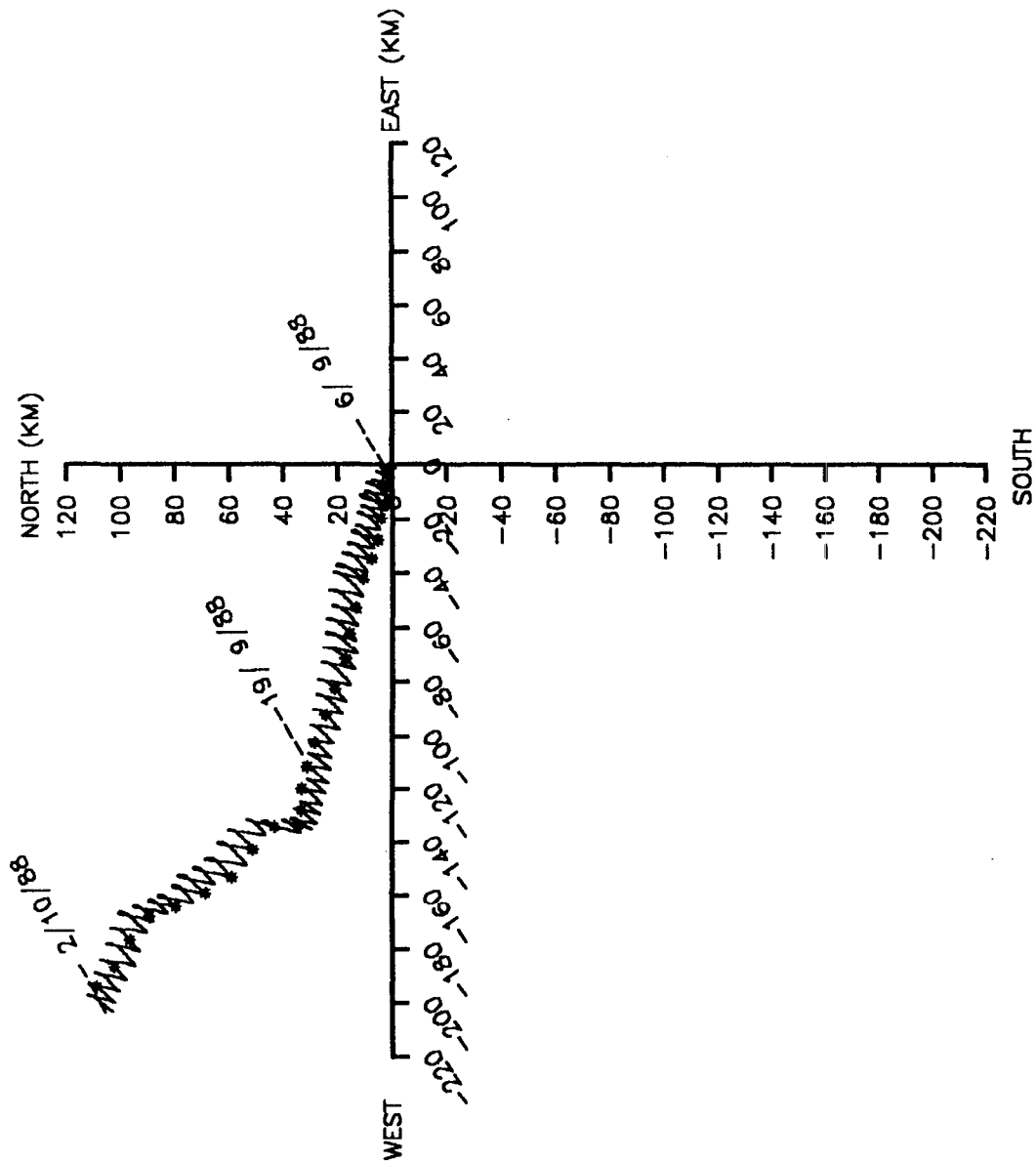
Meter no. 9348 Rig no. C35FC Depth of water(m) 30.0
 Start/End 1988/09/06 AT 06:23:00 1988/10/02 AT 16:40:00
 Position 52 36.50N 03 45.20E Meter Height(m) 7.0



SPEED (m/s)

VECTOR PLOT

Meter no. 9348 Rig no. C35FC Depth of water(m) 30.0
Start/End 1988/09/06 AT 06:23:00 1988/10/02 AT 16:40:00
Position 52 36.50N 03 45.20E Meter Height(m) 7.0

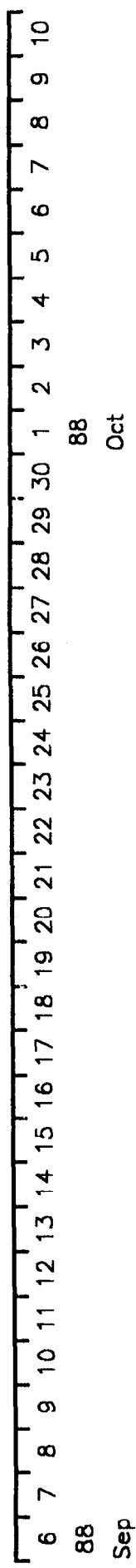
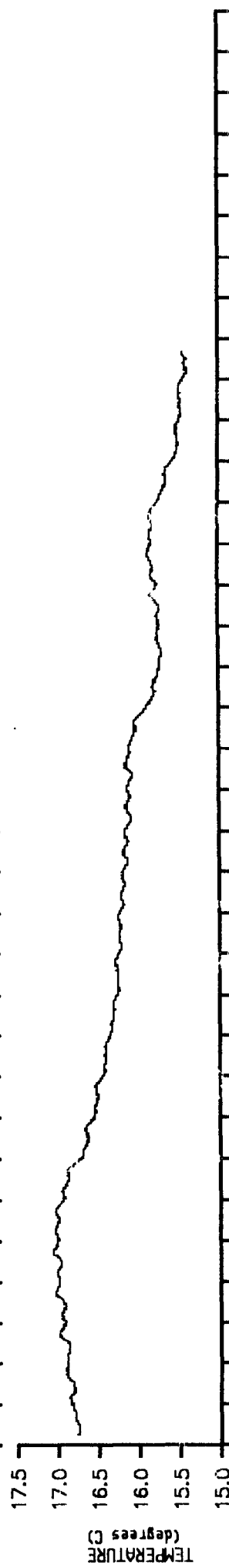
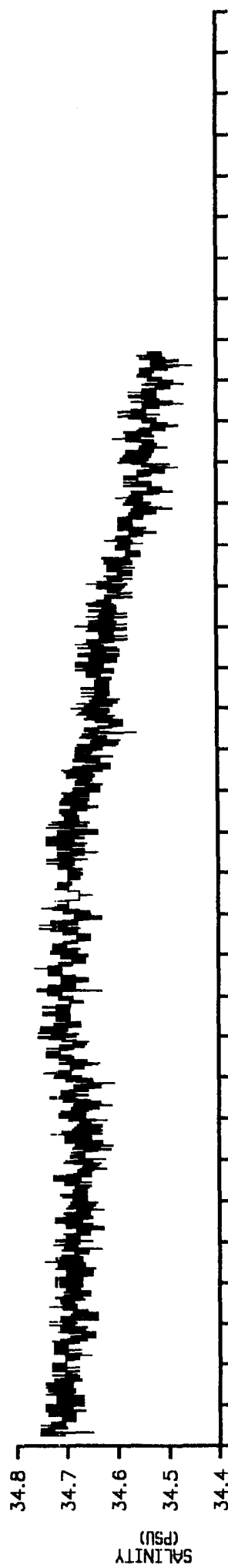
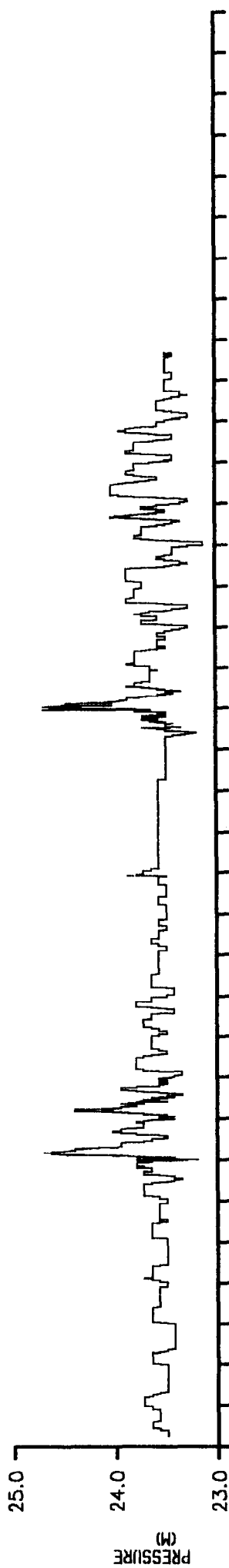


TEMPERATURE, SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9348 Rig no. C35FC Depth of water(m) 30.0

Start/End 1988/09/06 AT 06:23:00 1988/10/02 AT 16:40:00

Position 52 36.50N 03 45.20E Meter Height(m) 7.0



STATISTICS FOR AS9348B C35FCS A

	Mean	Variance	Standard deviation
Eastings	-0.0889	0.58842137E-01	0.24257398E+00
Northings	0.0449	0.24131763E+00	0.49124098E+00
Speed	0.5043	0.55765674E-01	0.23614758E+00

Vector mean speed 0.0996
Vector Mean Direction -63.2

Maximum ten values									
Eastings					Northings				
0.308	0.302	0.282	0.276	0.276	0.966	0.960	0.953	0.952	0.946
0.272	0.272	0.272	0.272	0.272	0.943	0.933	0.929	0.929	0.928

Minimum ten values									
Eastings					Northings				
-0.662	-0.664	-0.664	-0.667	-0.668	-0.749	-0.750	-0.752	-0.752	-0.759
-0.671	-0.672	-0.676	-0.676	-0.686	-0.762	-0.770	-0.778	-0.794	-0.824

Maximum speeds									
0.987	0.982	0.976	0.976	0.964	0.961	0.958	0.955	0.953	0.953
0.950	0.950	0.950	0.947	0.947	0.944	0.944	0.941	0.938	0.938
0.935	0.935	0.935	0.935	0.932	0.929	0.929	0.929	0.926	0.926
0.926	0.926	0.923	0.923	0.923	0.923	0.923	0.923	0.921	0.918
0.918	0.918	0.918	0.918	0.918	0.918	0.918	0.915	0.915	0.915
0.912	0.912	0.912	0.909	0.909	0.909	0.909	0.909	0.909	0.906
0.906	0.906	0.906	0.906	0.906	0.906	0.903	0.903	0.903	0.903
0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.897	0.897	0.897
0.897	0.897	0.897	0.897	0.897	0.897	0.897	0.897	0.897	0.897
0.897	0.897	0.894	0.894	0.894	0.894	0.892	0.892	0.892	0.889

Variance ellipse statistics

Maximum variance 0.2865E+00	Direction	24.0
Minimum variance 0.1368E-01	Direction	114.0
Total variance 0.3002E+00	Ratio of variances	0.4775E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		-9.4
Average direction. maxdir +PI/2 to maxdir -PI/2		189.7

STATISTICS FOR AS9348B C35FCSF A

	Mean	Variance	Standard deviation
Eastings	-0.0898	0.12005365E-02	0.34648761E-01
Northings	0.0508	0.17744887E-02	0.42124681E-01
Speed	0.1140	0.59585250E-03	0.24410095E-01

Vector mean speed 0.1031
 Vector Mean Direction -60.5

Maximum ten values

Eastings	Northings
----------	-----------

0.014	0.011	-0.001	-0.012	-0.023	0.154	0.147	0.145	0.131	0.125
-0.041	-0.041	-0.043	-0.049	-0.050	0.123	0.120	0.116	0.112	0.111

Minimum ten values

Eastings	Northings
----------	-----------

-0.128	-0.130	-0.130	-0.133	-0.134	0.013	0.013	0.012	0.012	0.011
-0.135	-0.136	-0.136	-0.137	-0.140	0.011	0.010	0.010	0.009	0.008

Maximum speeds

0.162	0.160	0.155	0.154	0.154	0.150	0.148	0.147	0.146	0.143
0.140	0.139	0.138	0.138	0.137	0.135	0.135	0.134	0.133	0.132
0.131	0.130	0.128	0.128	0.127	0.126	0.126	0.125	0.125	0.124
0.123	0.123	0.122	0.122	0.121	0.121	0.121	0.121	0.120	0.119
0.118	0.118	0.118	0.117	0.116	0.115	0.115	0.112	0.111	0.111
0.110	0.109	0.108	0.105	0.105	0.102	0.101	0.100	0.097	0.096
0.095	0.094	0.092	0.091	0.090	0.090	0.089	0.089	0.088	0.085
0.084	0.083	0.081	0.081	0.078	0.076	0.075	0.074	0.071	0.069
0.065	0.059								

Variance ellipse statistics

Maximum variance 0.2445E-02	Direction	36.3
Minimum variance 0.5298E-03	Direction	126.3
Total variance 0.2975E-02	Ratio of variances	0.2167E+00
Average direction. maxdir -PI/2 to maxdir +PI/2		-63.4
Average direction. maxdir +PI/2 to maxdir -PI/2		248.3

STICK TIME SERIES PLOT

Rig no. C35FC Depth of water(m) 30.0
Start/End 1988/09/06 AT 06:23:00 1988/10/02 AT 16:40:00
Position 52 36.50N 03 45.20E
Filtered Series Scale 0.1 m/s _____

Meter No. Meter Height
9348 7.0 M
1121 12.0 M



9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6 7 8 9 10 11 12 13

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Rig information details for C37FC

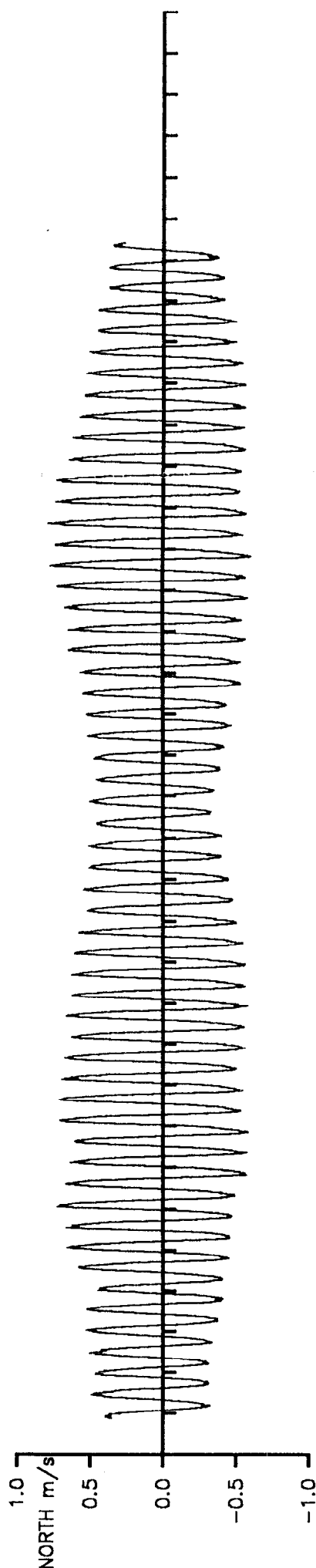
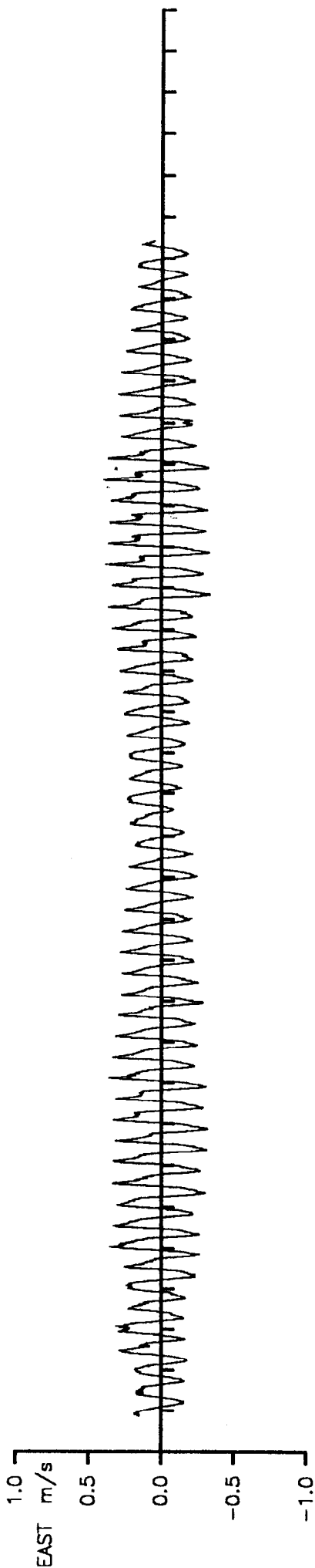
Position Latitude	:	52 36.93N
Position Longitude	:	03 46.12E
Water depth	:	30.0 m
Deployed on cruise	:	C37
Recovered on cruise	:	C39
Site name identification	:	F
Magnetic deviation	:	3.1 degrees west
Rig deployed on	:	04-OCT-88 20:53:00
Rig recovered on	:	02-NOV-88 10:30:00
Period of deployment	:	28.6 days
Comments	:	Launch and recovery successful

Meter information details for 1121

Rig No	:	C37FC
Meter No	:	1121
Recording interval	:	600.0 seconds
Meter height from bottom	:	12.0 m
Position of meter on rig	:	T
Meter type	:	S4
Meter started	:	03-OCT-88 19:40:00
Meter stopped	:	02-NOV-88 12:50:00
Period switched on	:	29.7 days
Period of good data	:	28.6 days
Total number of scans	:	4113
Timing error	:	None
Comments	:	Good record obtained

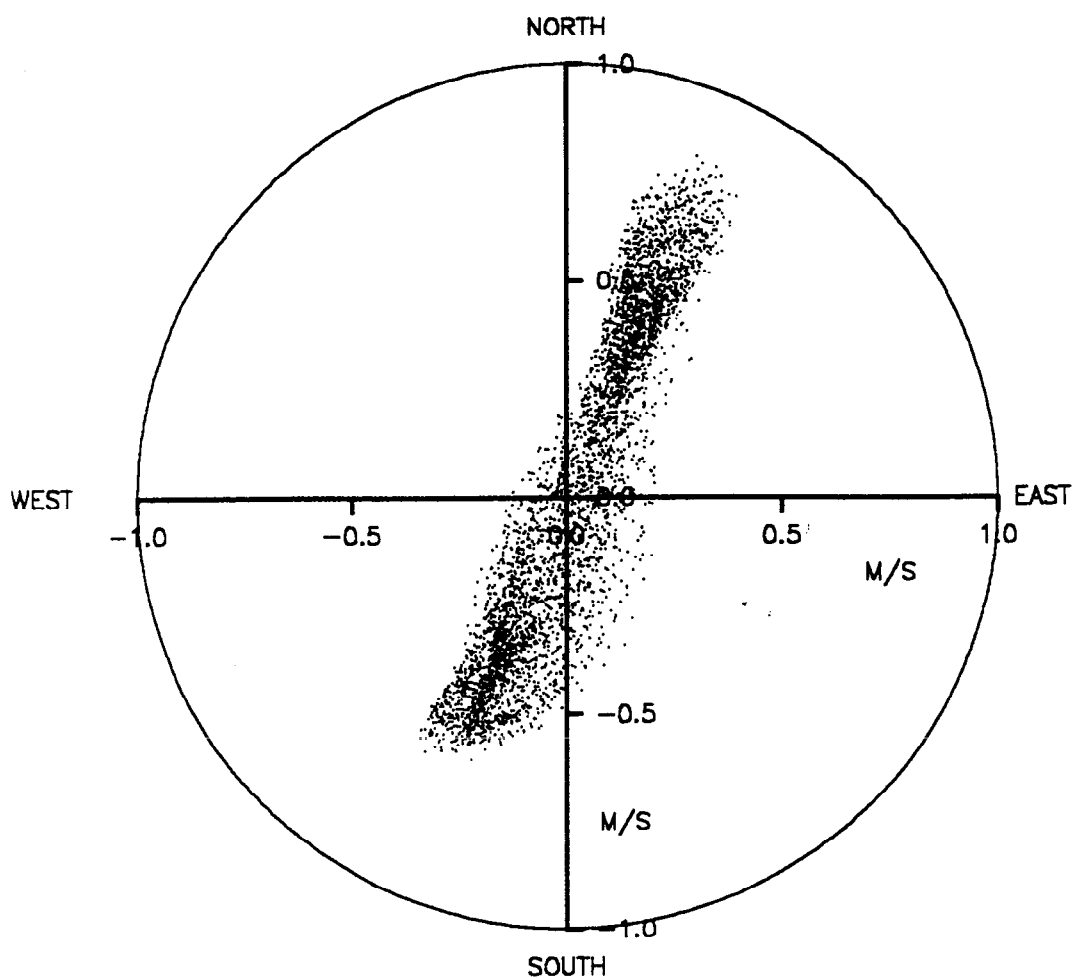
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 1121 Rig no. C37FC Depth of water(m) 30.0
Start/End 1988/10/04 AT 20:53:00 1988/11/02 AT 10:30:00
Position 52 36.93N 03 46.12E Meter Height(m) 12.0



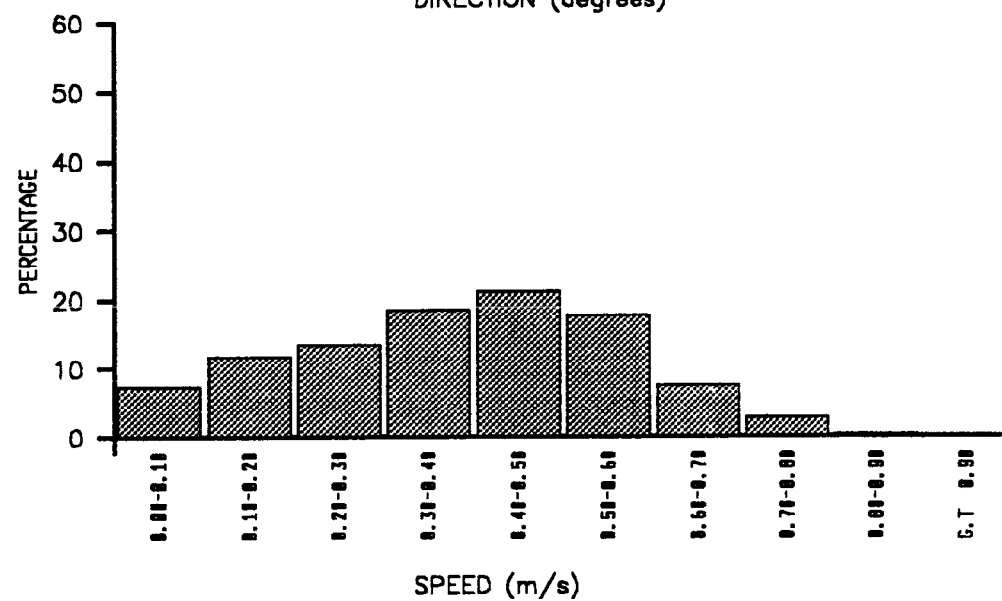
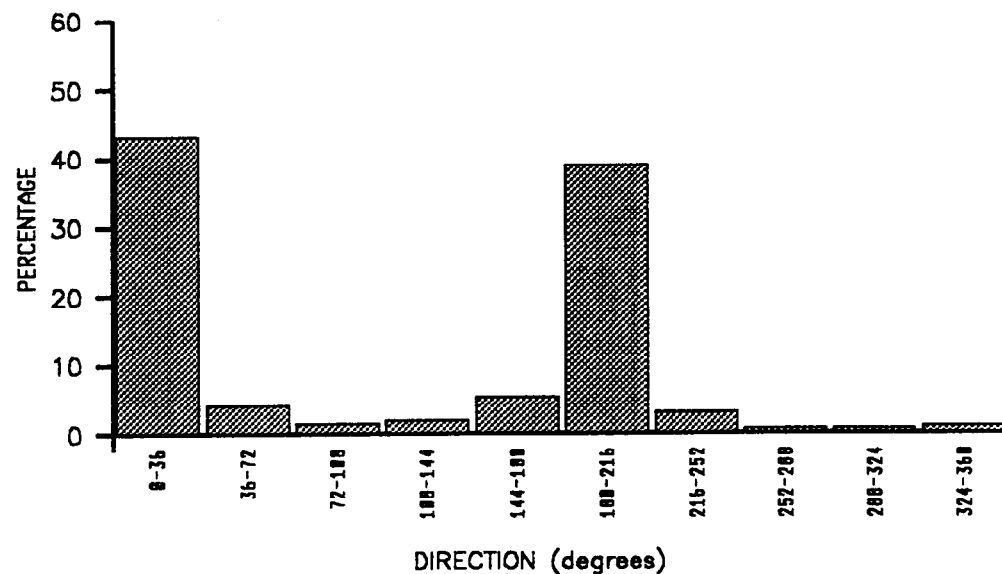
SCATTER PLOT

Meter no. 1121 Rig no. C37FC Depth of water(m) 30.0
 Start/End 1988/10/04 AT 20:53:00 1988/11/02 AT 10:30:00
 Position 52 36.93N 03 46.12E Meter Height(m) 12.0



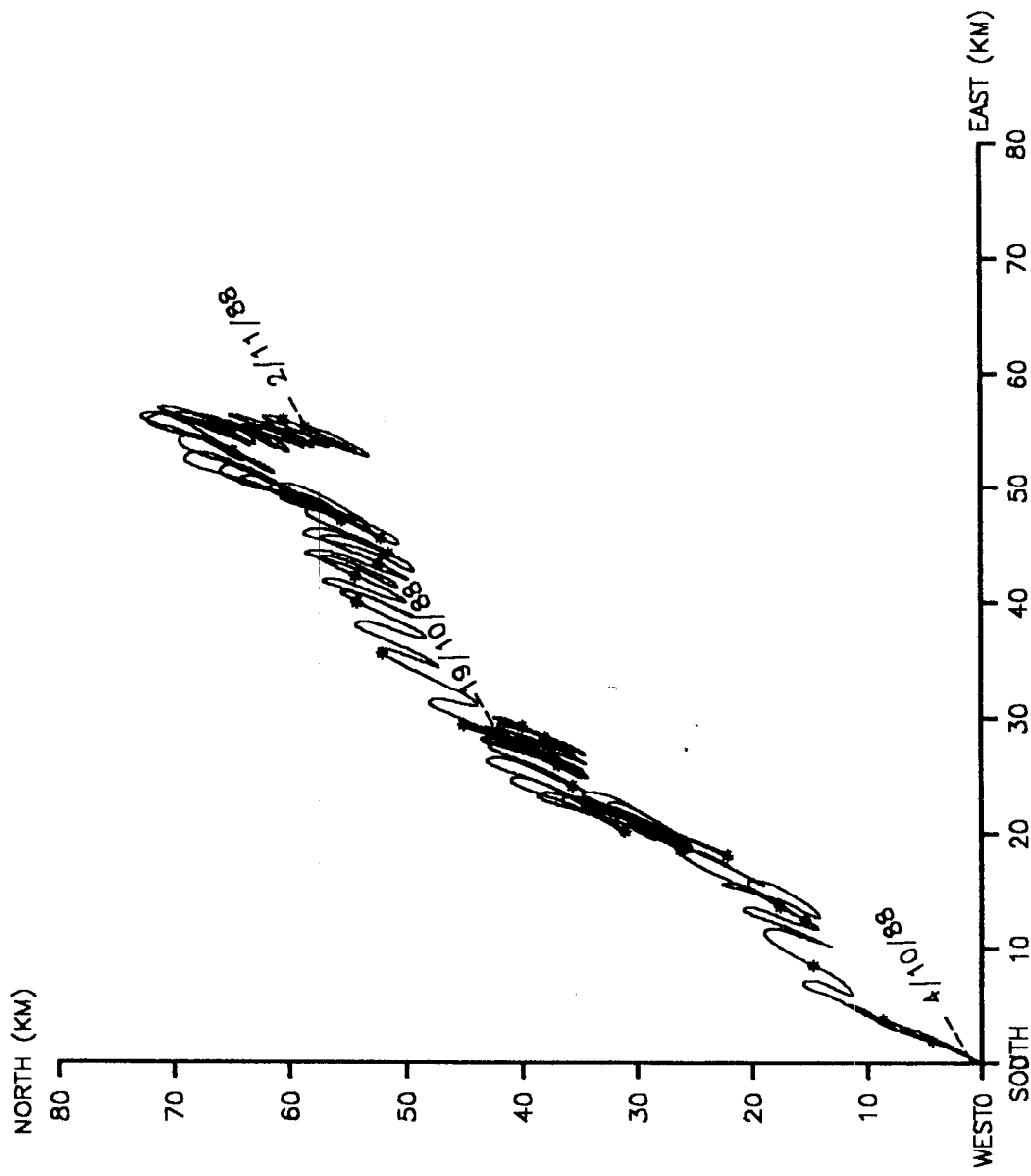
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1121 Rig no. C37FC Depth of water(m) 30.0
 Start/End 1988/10/04 AT 20:53:00 1988/11/02 AT 10:30:00
 Position 52 36.93N 03 46.12E Meter Height(m) 12.0



VECTOR PLOT

Meter no. 1121 Rig no. C37FC Depth of water(m) 30.0
Start/End 1988/10/04 AT 20:53:00 1988/11/02 AT 10:30:00
Position 52 36.93N 03 46.12E Meter Height(m) 12.0



STATISTICS FOR S41121T C37FCS A

	Mean	Variance	Standard deviation
Eastings	0.0218	0.27571701E-01	0.16604733E+00
Northings	0.0231	0.14934170E+00	0.38644755E+00
Speed	0.3824	0.31684544E-01	0.17800152E+00

Vector mean speed 0.0317
 Vector Mean Direction 43.4

Maximum ten values									
Eastings					Northings				
0.395	0.381	0.380	0.379	0.366	0.788	0.770	0.762	0.756	0.752
0.362	0.362	0.362	0.361	0.361	0.743	0.743	0.741	0.741	0.737

Minimum ten values									
Eastings					Northings				
-0.318	-0.319	-0.319	-0.321	-0.323	-0.573	-0.575	-0.579	-0.581	-0.583
-0.329	-0.330	-0.331	-0.340	-0.341	-0.583	-0.583	-0.585	-0.585	-0.605

Maximum speeds									
0.844	0.838	0.833	0.824	0.820	0.815	0.814	0.813	0.809	0.803
0.797	0.796	0.794	0.793	0.792	0.786	0.785	0.785	0.783	0.782
0.780	0.775	0.775	0.774	0.773	0.773	0.772	0.768	0.766	0.765
0.761	0.761	0.761	0.759	0.758	0.758	0.756	0.756	0.754	0.754
0.753	0.753	0.752	0.752	0.751	0.751	0.750	0.750	0.748	0.748
0.748	0.743	0.742	0.742	0.741	0.741	0.739	0.739	0.739	0.738
0.737	0.736	0.736	0.736	0.735	0.732	0.730	0.730	0.730	0.727
0.726	0.726	0.726	0.726	0.726	0.725	0.724	0.724	0.724	0.724
0.723	0.723	0.722	0.722	0.721	0.720	0.720	0.720	0.719	0.719
0.718	0.717	0.717	0.717	0.716	0.716	0.716	0.715	0.715	0.714

Variance ellipse statistics

Maximum variance 0.1735E+00	Direction	22.1
Minimum variance 0.3413E-02	Direction	112.1
Total variance 0.1769E+00	Ratio of variances	0.1967E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		3.4
Average direction. maxdir +PI/2 to maxdir -PI/2		175.9

STATISTICS FOR S41121T C37FGSF A

	Mean	Variance	Standard deviation
Eastings	0.0213	0.40762150E-03	0.20189635E-01
Northings	0.0232	0.90882555E-03	0.30146740E-01
Speed	0.0404	0.66640601E-03	0.25814846E-01

Vector mean speed 0.0315
 Vector Mean Direction 42.6

Maximum ten values

Eastings	Northings
----------	-----------

0.081	0.077	0.075	0.064	0.063	0.079	0.076	0.075	0.075	0.073
0.055	0.055	0.053	0.047	0.045	0.073	0.071	0.070	0.067	0.063

Minimum ten values

Eastings	Northings
----------	-----------

-0.005	-0.005	-0.006	-0.007	-0.007	-0.008	-0.011	-0.022	-0.028	-0.029
-0.008	-0.009	-0.010	-0.011	-0.011	-0.031	-0.033	-0.033	-0.035	-0.036

Maximum speeds

0.110	0.109	0.098	0.096	0.093	0.091	0.089	0.083	0.079	0.078
0.078	0.069	0.068	0.067	0.063	0.062	0.061	0.061	0.060	0.058
0.058	0.057	0.056	0.054	0.053	0.052	0.052	0.051	0.051	0.051
0.050	0.049	0.045	0.044	0.044	0.044	0.042	0.041	0.040	0.040
0.038	0.037	0.037	0.037	0.036	0.036	0.036	0.036	0.036	0.035
0.034	0.033	0.033	0.032	0.031	0.031	0.029	0.029	0.028	0.028
0.028	0.027	0.026	0.024	0.023	0.021	0.021	0.020	0.020	0.019
0.019	0.018	0.017	0.017	0.016	0.016	0.016	0.015	0.014	0.012
0.012	0.010	0.009	0.009	0.008	0.007	0.005	0.004	0.003	0.002
0.002									

Variance ellipse statistics

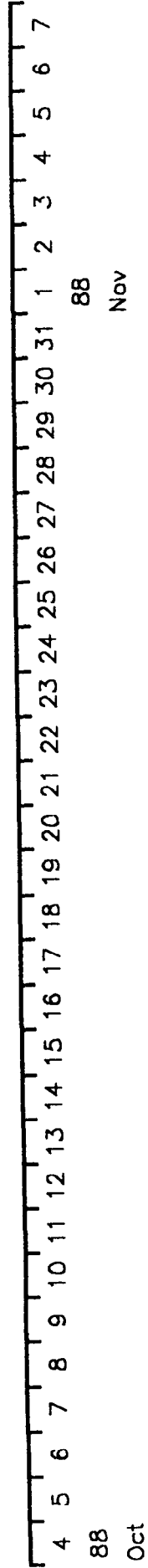
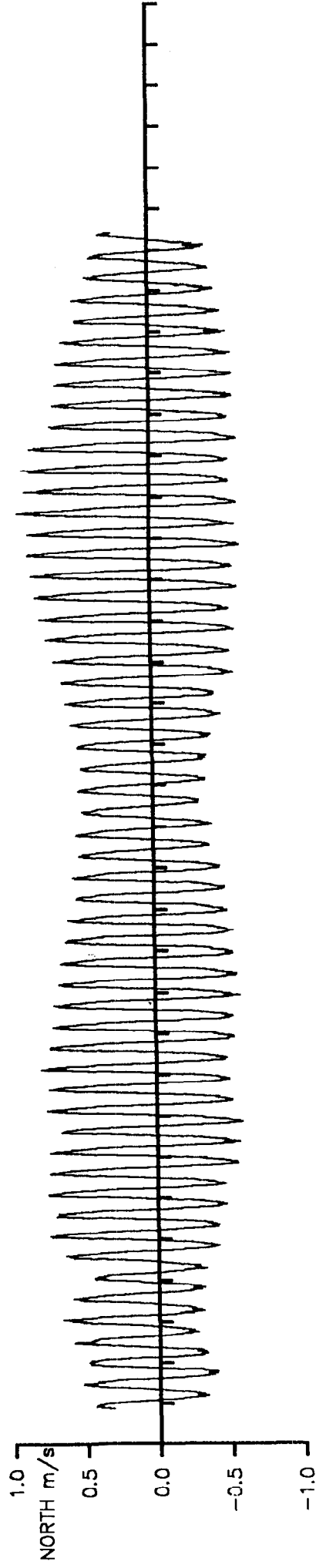
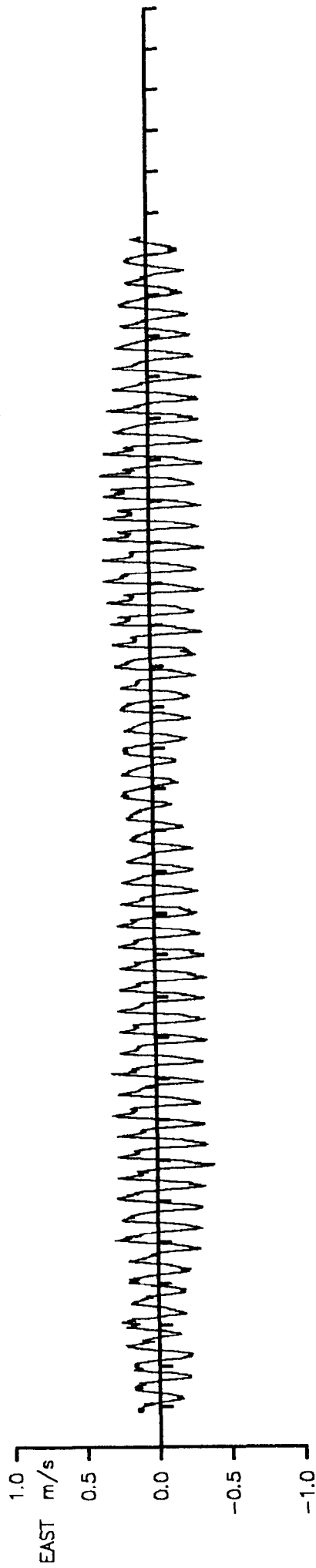
Maximum variance 0.1134E-02	Direction 29.1
Minimum variance 0.1827E-03	Direction 119.1
Total variance 0.1316E-02	Ratio of variances 0.1611E+00
Average direction. maxdir -PI/2 to maxdir +PI/2	15.6
Average direction. maxdir +PI/2 to maxdir -PI/2	158.1

Meter information details for 9348

Rig No	:	C37FC
Meter No	:	9348
Recording interval	:	600.0 seconds
Meter height from bottom	:	7.0 m
Position of meter on rig	:	B
Meter type	:	AS
Meter started	:	03-OCT-88 17:40:00
Meter stopped	:	02-NOV-88 14:00:00
Period switched on	:	29.8 days
Period of good data	:	28.6 days
Total number of scans	:	4113
Timing error	:	None
Comments	:	Pressure sensor indicates some instability on 7/8-OCT-88

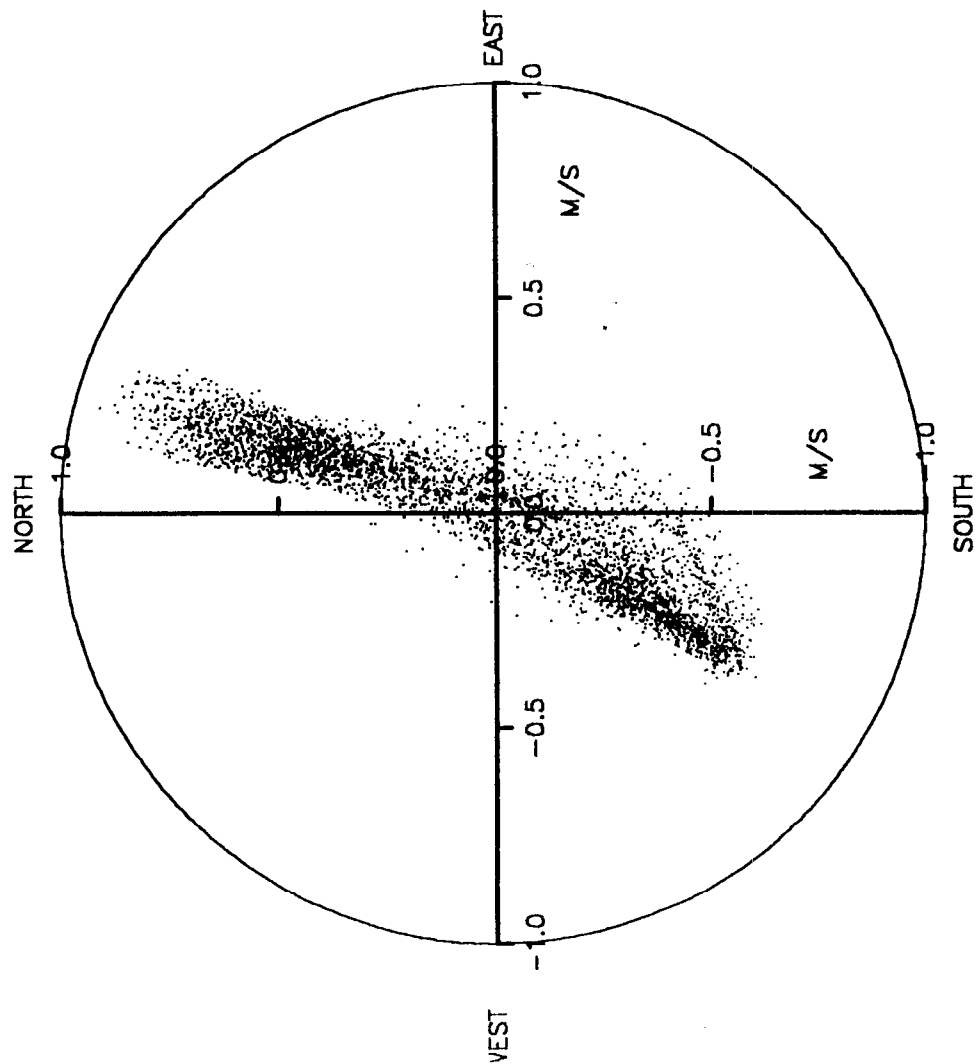
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 9348 Rig no. C37FC Depth of water(m) 30.0
Start/End 1988/10/04 AT 20:53:00 1988/11/02 AT 10:30:00
Position 52 36.93N 03 46.12E Meter Height(m) 7.0



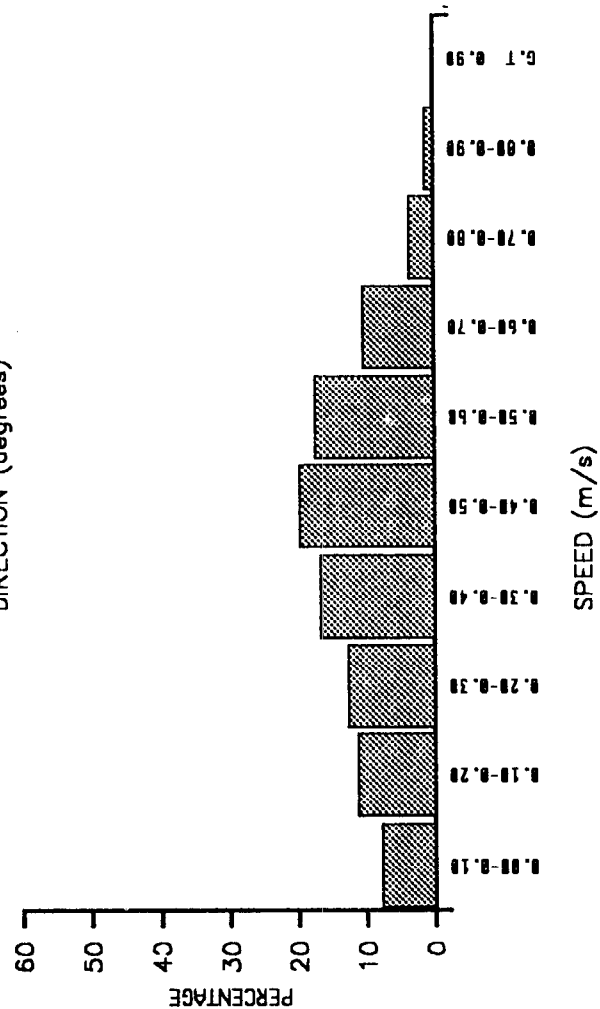
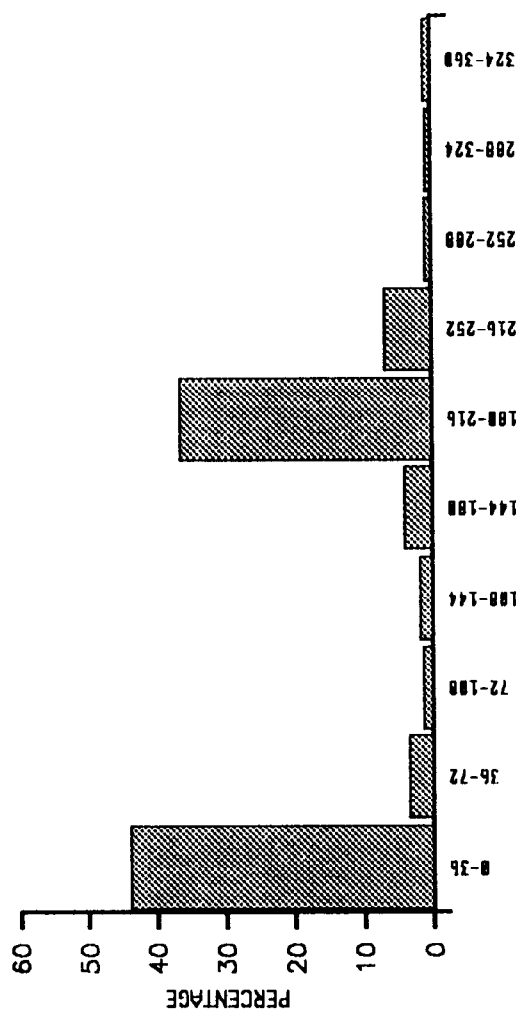
SCATTER PLOT

Meter no. 9348 Rig no. C37FC Depth of water(m) 30.0
 Start/End 1988/10/04 AT 20:53:00 1988/11/02 AT 10:30:00
 Position 52 36.93N 03 46.12E Meter Height(m) 7.0



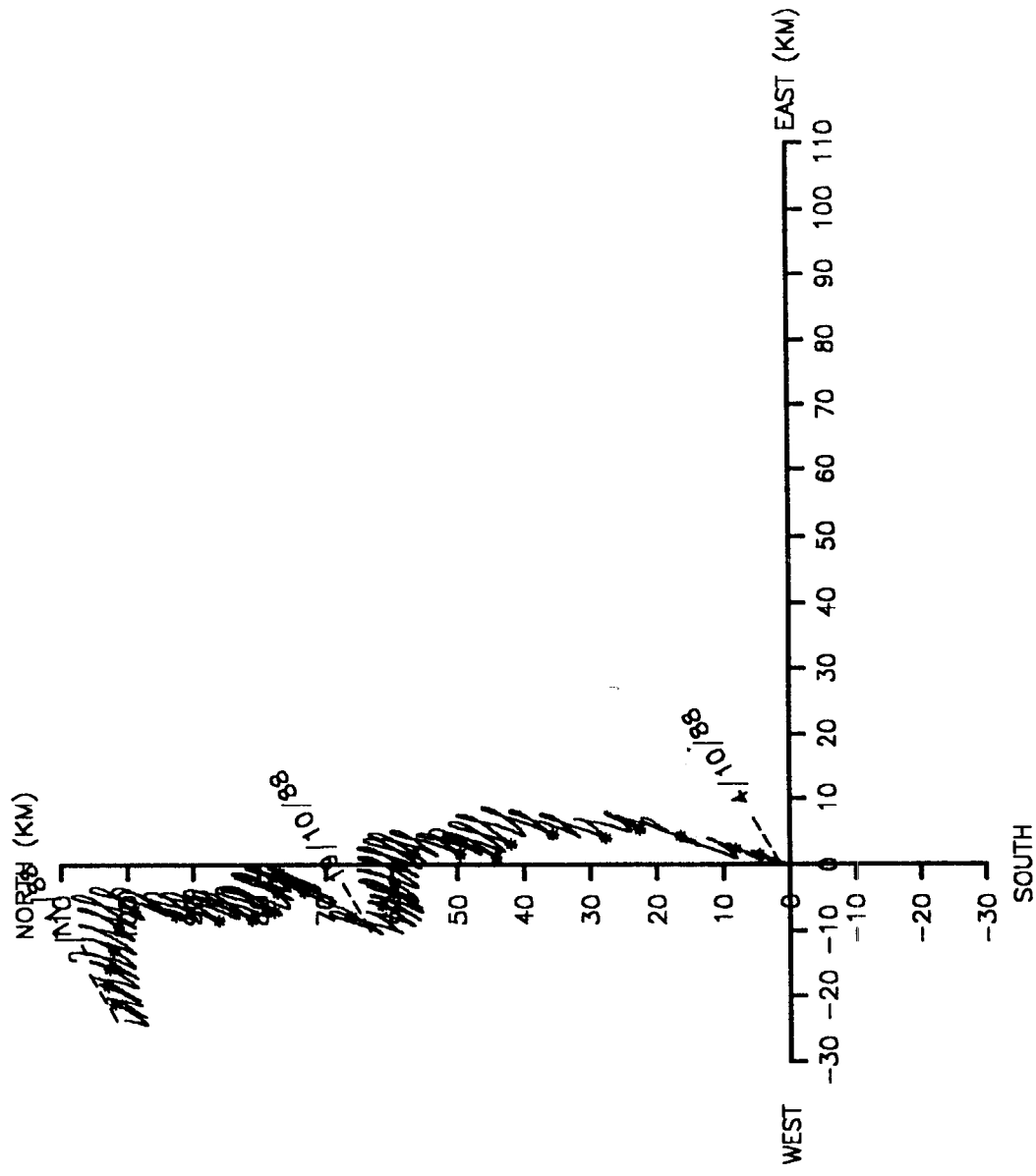
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 9348 Rig no. C37FC Depth of water(m) 30.0
 Start/End 1988/10/04 AT 20:53:00 1988/11/02 AT 10:30:00
 Position 52 36.93N 03 46.12E Meter Height(m) 7.0



VECTOR PLOT

Meter no. 9348 Rig no. C37FC Depth of water(m) 30.0
Start/End 1988/10/04 AT 20:53:00 1988/11/02 AT 10:30:00
Position 52 36.93N 03 46.12E Meter Height(m) 7.0

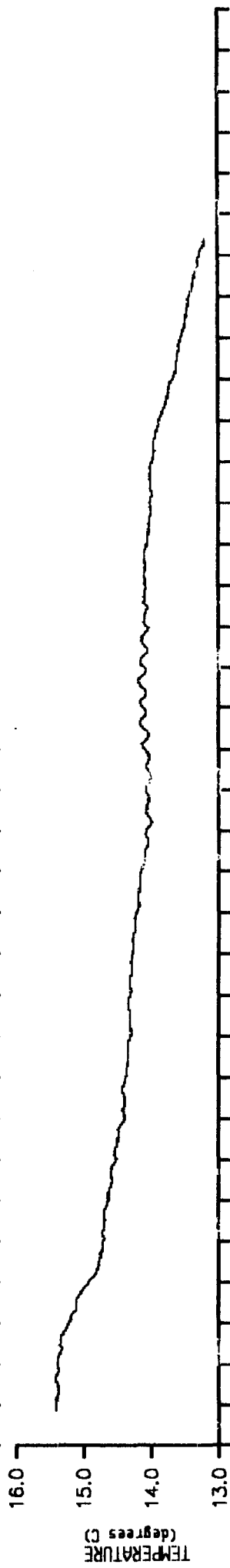
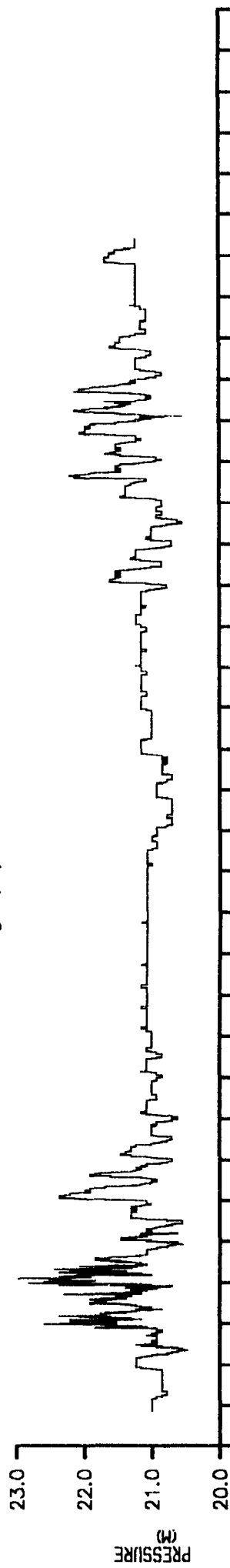


TEMPERATURE, SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9348 Rig no. C37FC Depth of water(m) 30.0

Start/End 1988/10/04 AT 20:53:00 1988/11/02 AT 10:30:00

Position 52 36.93N 03 46.12E Meter Height(m) 7.0



4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7

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STATISTICS FOR AS9348B C37FCS A

	Mean	Variance	Standard deviation
Eastings	-0.0096	0.30497435E-01	0.17463511E+00
Northings	0.0407	0.16218197E+00	0.40271819E+00
Speed	0.3972	0.36661129E-01	0.19147092E+00

Vector mean speed 0.0418
 Vector Mean Direction -13.2

Maximum ten values

Eastings	Northings
----------	-----------

0.332	0.329	0.320	0.318	0.313	0.908	0.873	0.869	0.856	0.852
0.312	0.310	0.309	0.307	0.307	0.844	0.834	0.834	0.829	0.827

Minimum ten values

Eastings	Northings
----------	-----------

-0.370	-0.370	-0.371	-0.373	-0.373	-0.592	-0.593	-0.594	-0.597	-0.597
-0.375	-0.378	-0.381	-0.383	-0.396	-0.597	-0.599	-0.600	-0.607	-0.615

Maximum speeds

0.941	0.909	0.906	0.900	0.894	0.883	0.880	0.880	0.877	0.877
0.877	0.874	0.865	0.860	0.857	0.857	0.857	0.854	0.854	0.851
0.848	0.848	0.845	0.842	0.839	0.839	0.836	0.833	0.830	0.830
0.830	0.828	0.828	0.825	0.822	0.822	0.822	0.819	0.816	0.816
0.816	0.816	0.816	0.813	0.813	0.813	0.807	0.807	0.804	0.804
0.804	0.801	0.801	0.799	0.799	0.799	0.796	0.796	0.793	0.793
0.793	0.793	0.793	0.790	0.790	0.787	0.787	0.787	0.784	0.781
0.781	0.781	0.781	0.781	0.778	0.775	0.775	0.772	0.772	0.772
0.769	0.769	0.769	0.769	0.767	0.767	0.767	0.764	0.764	0.764
0.761	0.761	0.761	0.761	0.761	0.761	0.761	0.758	0.755	0.755

Variance ellipse statistics

Maximum variance 0.1883E+00	Direction	22.2
Minimum variance 0.4330E-02	Direction	112.2
Total variance 0.1927E+00	Ratio of variances	0.2299E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		-0.8
Average direction. maxdir +PI/2 to maxdir -PI/2		181.7

STATISTICS FOR AS9348B C37FCSF A

	Mean	Variance	Standard deviation
Eastings	-0.0110	0.55888109E-03	0.23640670E-01
Northings	0.0402	0.10896712E-02	0.33010166E-01
Speed	0.0535	0.51102112E-03	0.22605781E-01

Vector mean speed 0.0417
 Vector Mean Direction -15.3

Maximum ten values									
Eastings					Northings				
0.061	0.058	0.054	0.048	0.037	0.107	0.107	0.104	0.100	0.099
0.034	0.021	0.014	0.014	0.012	0.092	0.084	0.083	0.082	0.082

Minimum ten values									
Eastings					Northings				
-0.040	-0.040	-0.042	-0.042	-0.044	-0.004	-0.006	-0.007	-0.008	-0.009
-0.046	-0.049	-0.050	-0.052	-0.053	-0.010	-0.011	-0.011	-0.012	-0.013

Maximum speeds									
0.108	0.107	0.105	0.100	0.100	0.098	0.098	0.092	0.090	0.090
0.085	0.083	0.081	0.079	0.078	0.076	0.076	0.075	0.072	0.069
0.068	0.068	0.067	0.067	0.065	0.065	0.064	0.063	0.062	0.060
0.058	0.057	0.055	0.055	0.055	0.054	0.053	0.053	0.053	0.053
0.053	0.053	0.052	0.052	0.052	0.051	0.051	0.050	0.050	0.046
0.046	0.046	0.046	0.044	0.044	0.044	0.043	0.042	0.042	0.042
0.041	0.041	0.040	0.040	0.039	0.038	0.037	0.036	0.036	0.035
0.035	0.033	0.032	0.031	0.031	0.031	0.031	0.030	0.029	0.028
0.028	0.028	0.026	0.026	0.025	0.025	0.024	0.023	0.023	0.020
0.020									

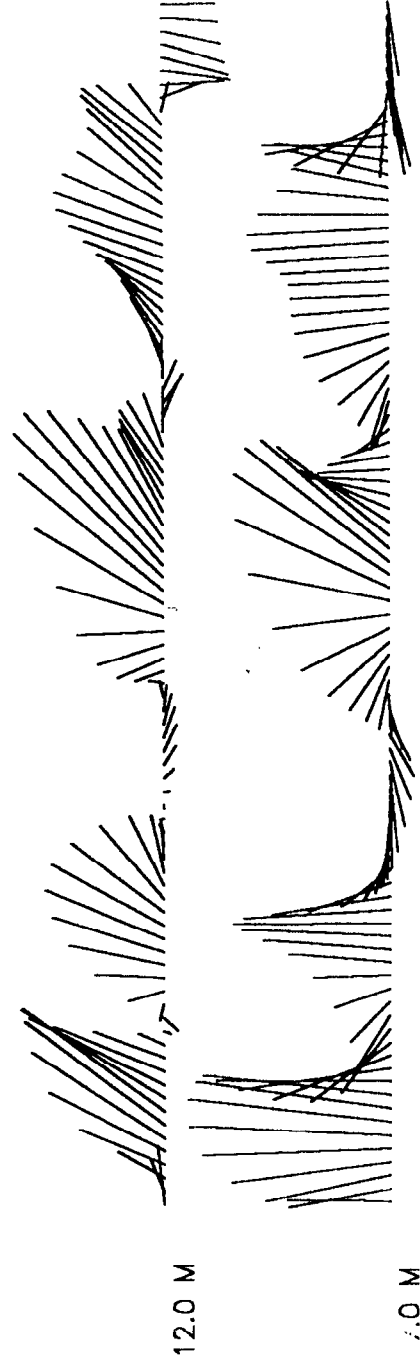
Variance ellipse statistics

Maximum variance 0.1450E-02	Direction	32.4
Minimum variance 0.1988E-03	Direction	122.4
Total variance 0.1649E-02	Ratio of variances	0.1372E+00
Average direction. maxdir -PI/2 to maxdir +PI/2		-38.0
Average direction. maxdir +PI/2 to maxdir -PI/2		239.4

STICK TIME SERIES PLOT

Rig no. C37FC Depth of water(m) 30.0
Start/End 1988/10/04 AT 20:53:00 1988/11/02 AT 10:30:00
Position 52 36.93N 03 46.12E
Filtered Series Scale 0.1 m/s

Meter No. Meter Height
9348 7.0 M
1121 12.0 M



7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10
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Rig information details for C39FC

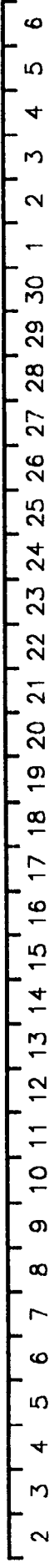
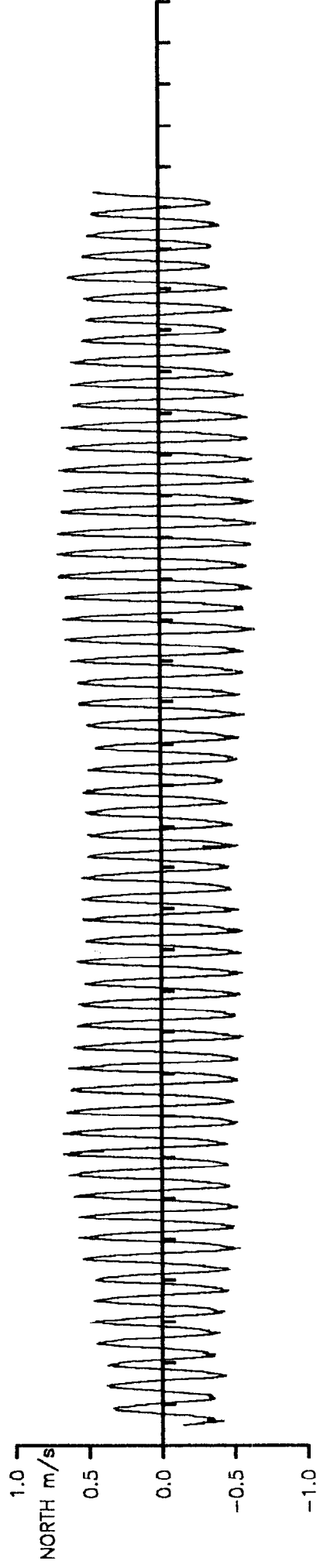
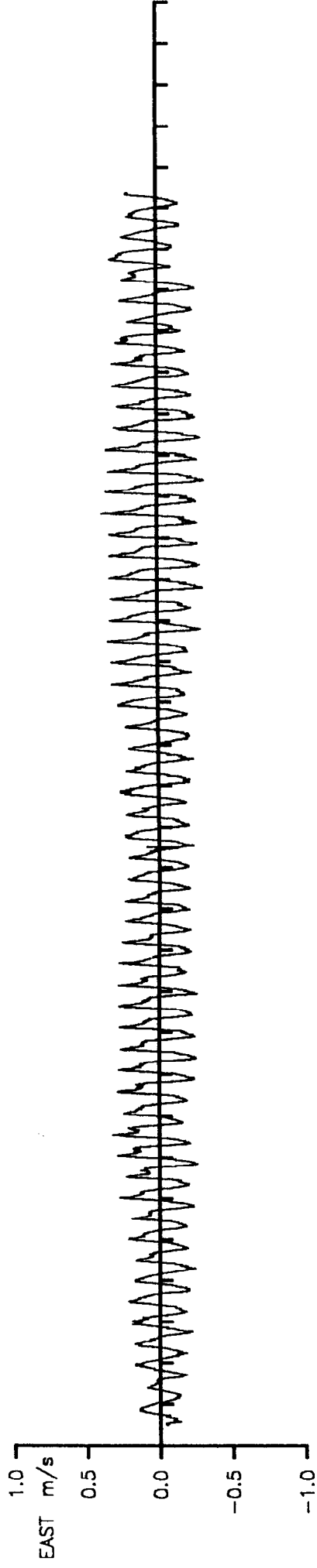
Position Latitude	:	52 37.02N
Position Longitude	:	03 45.94E
Water depth	:	30.0 m
Deployed on cruise	:	C39
Recovered on cruise	:	C41
Site name identification	:	F
Magnetic deviation	:	3.1 degrees west
Rig deployed on	:	02-NOV-88 12:32:00
Rig recovered on	:	02-DEC-88 09:00:00
Period of deployment	:	29.9 days
Comments	:	Launch and recovery successful

Meter information details for 1117

Rig No	:	C39FC
Meter No	:	1117
Recording interval	:	600.0 seconds
Meter height from bottom	:	12.0 m
Position of meter on rig	:	T
Meter type	:	S4
Meter started	:	01-NOV-88 13:50:00
Meter stopped	:	03-DEC-88 03:00:00
Period switched on	:	31.5 days
Period of good data	:	29.8 days
Total number of scans	:	4298
Timing error	:	None
Comments	:	Good record obtained

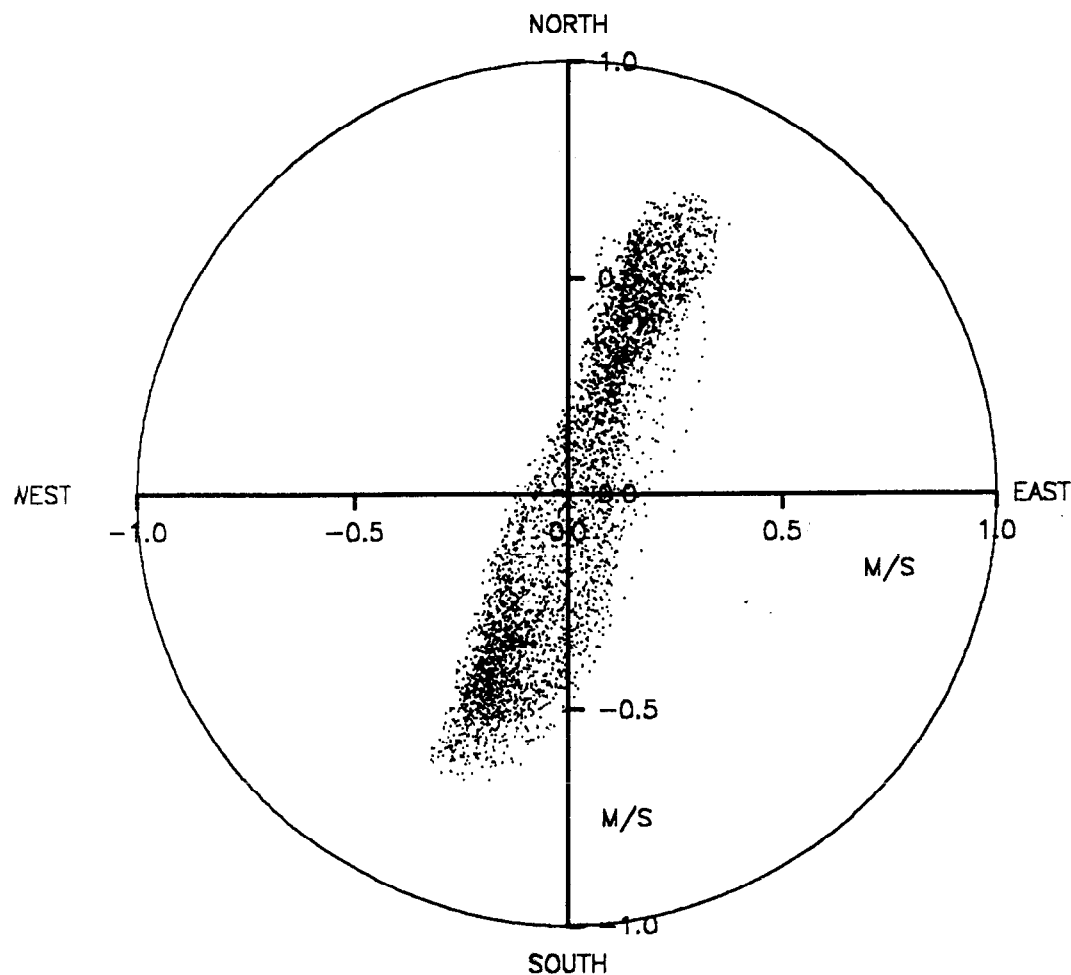
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 1117 Rig no. C39FC Depth of water(m) 30.0
Start/End 1988/11/02 AT 12:32:00 1988/12/02 AT 09:00:00
Position 52 37.02N 03 45.94E Meter Height(m) 12.0



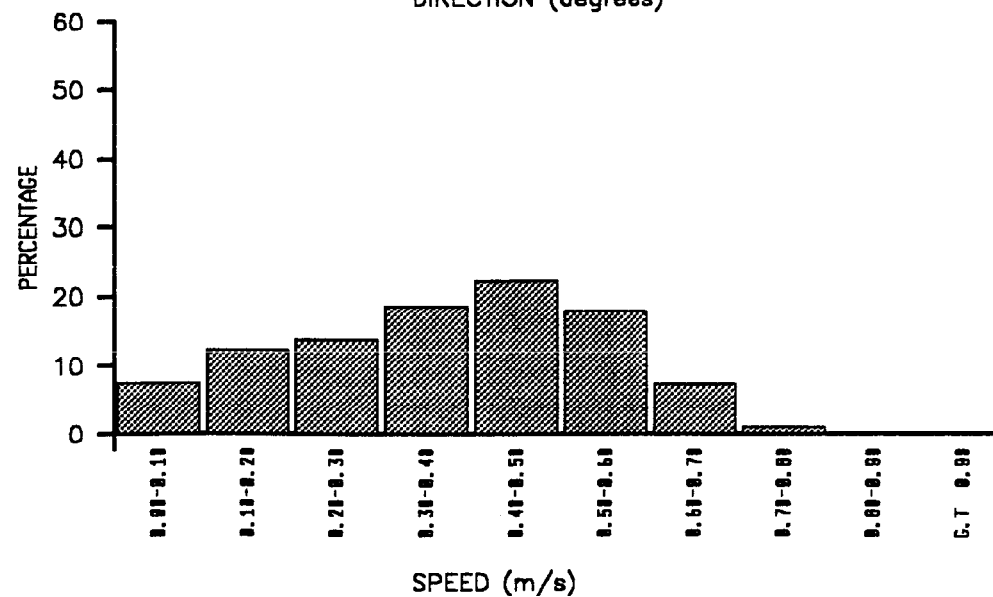
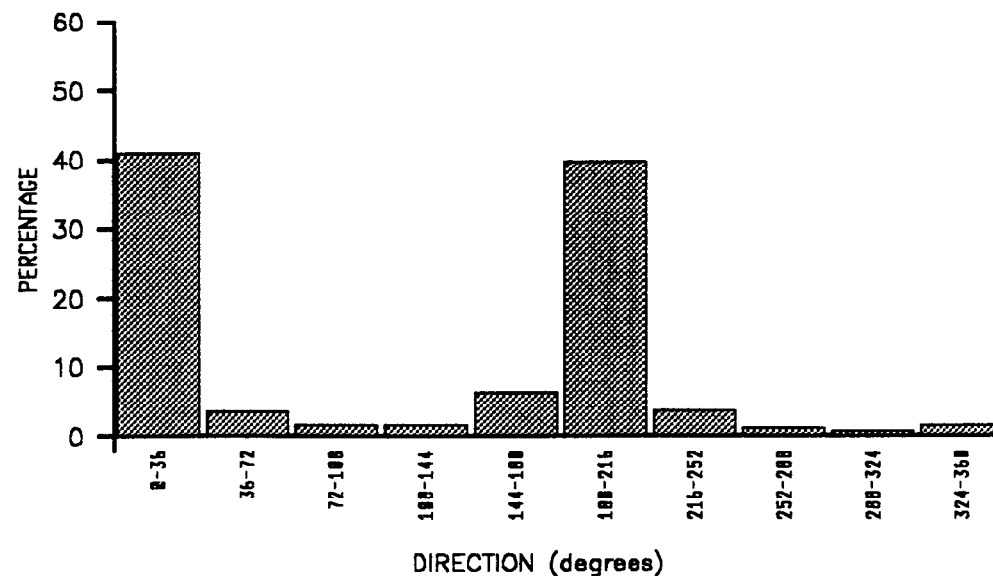
SCATTER PLOT

Meter no. 1117 Rig no. C39FC Depth of water(m) 30.0
 Start/End 1988/11/02 AT 12:32:00 1988/12/02 AT 09:00:00
 Position 52 37.02N 03 45.94E Meter Height(m) 12.0



HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1117 Rig no. C39FC Depth of water(m) 30.0
 Start/End 1988/11/02 AT 12:32:00 1988/12/02 AT 09:00:00
 Position 52 37.02N 03 45.94E Meter Height(m) 12.0

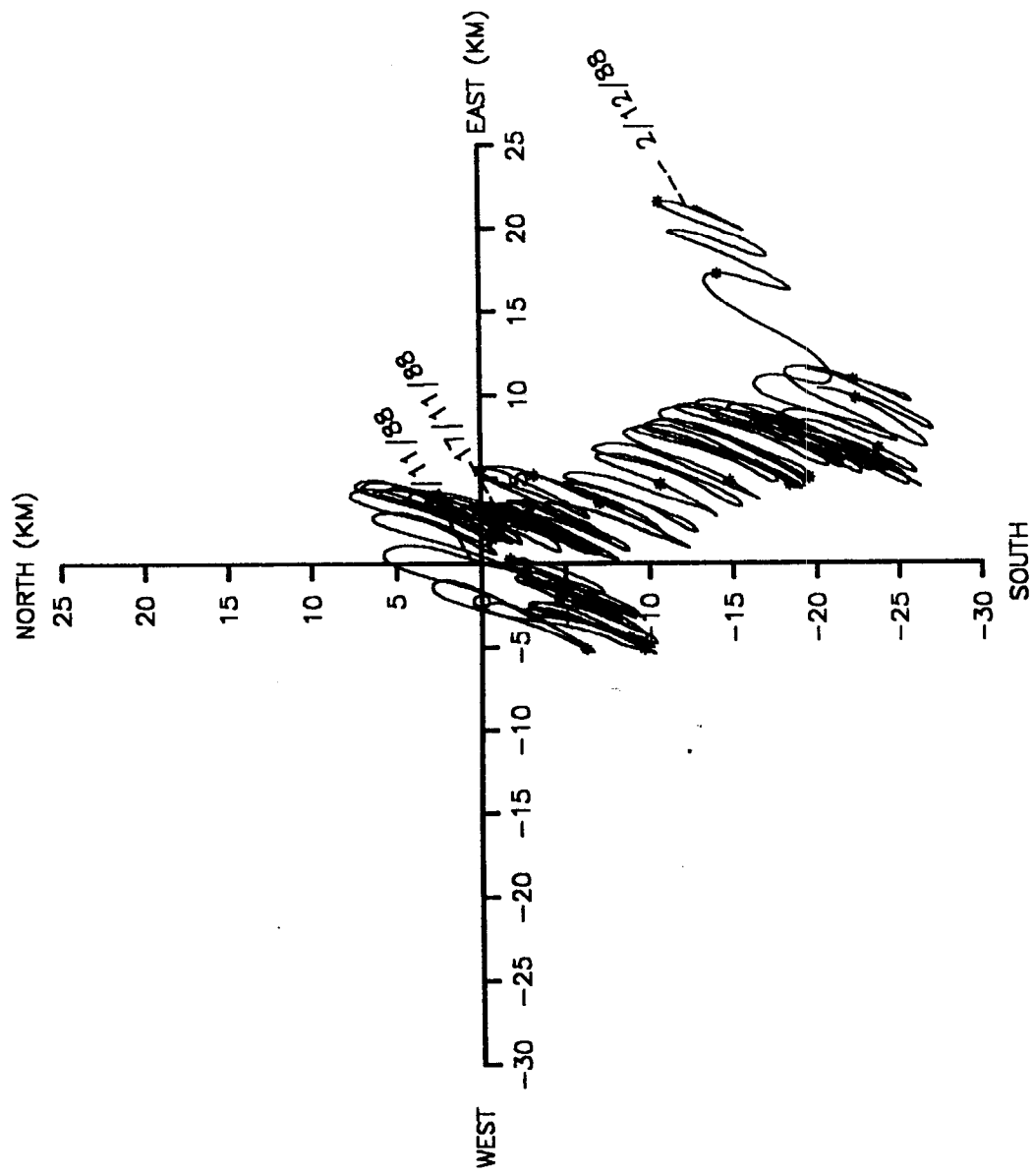


VECTOR PLOT

Meter no. 1117 Rig no. C39FC Depth of water(m) 30.0

Start/End 1988/11/02 AT 12:32:00 1988/12/02 AT 09:00:00

Position 52 37.02N 03 45.94E Meter Height(m) 12.0



STATISTICS FOR S41117T C39FCS A

	Mean	Variance	Standard deviation
Eastings	0.0083	0.23624301E-01	0.15370196E+00
Northings	-0.0050	0.14461035E+00	0.38027674E+00
Speed	0.3731	0.29098753E-01	0.17058349E+00

Vector mean speed 0.0097
 Vector Mean Direction 121.2

Maximum ten values

Eastings	Northings
----------	-----------

0.375	0.350	0.345	0.344	0.343	0.694	0.691	0.687	0.686	0.681
0.342	0.341	0.340	0.339	0.338	0.678	0.678	0.678	0.675	0.674

Minimum ten values

Eastings	Northings
----------	-----------

-0.298	-0.298	-0.302	-0.302	-0.305	-0.632	-0.633	-0.642	-0.644	-0.645
-0.315	-0.315	-0.318	-0.319	-0.321	-0.646	-0.647	-0.649	-0.661	-0.662

Maximum speeds

0.751	0.749	0.746	0.746	0.743	0.737	0.737	0.736	0.732	0.730
0.728	0.728	0.726	0.724	0.723	0.723	0.721	0.720	0.720	0.720
0.717	0.716	0.716	0.716	0.716	0.716	0.716	0.715	0.713	0.713
0.712	0.710	0.709	0.708	0.706	0.702	0.701	0.701	0.700	0.700
0.699	0.699	0.699	0.699	0.699	0.698	0.698	0.698	0.697	0.695
0.695	0.695	0.694	0.694	0.693	0.692	0.692	0.692	0.692	0.692
0.690	0.690	0.690	0.690	0.689	0.688	0.687	0.687	0.687	0.687
0.686	0.686	0.686	0.685	0.684	0.684	0.684	0.682	0.682	0.682
0.680	0.680	0.680	0.680	0.679	0.679	0.678	0.678	0.678	0.677
0.676	0.676	0.676	0.675	0.674	0.674	0.674	0.674	0.673	0.673

Variance ellipse statistics

Maximum variance 0.1646E+00	Direction	20.6
Minimum variance 0.3657E-02	Direction	110.6
Total variance 0.1682E+00	Ratio of variances	0.2222E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		2.4
Average direction. maxdir +PI/2 to maxdir -PI/2		177.0

STATISTICS FOR S41117T C39FCSF A

	Mean	Variance	Standard deviation
Eastings	0.0059	0.31032227E-03	0.17615966E-01
Northings	-0.0087	0.59476262E-03	0.24387758E-01
Speed	0.0270	0.28196769E-03	0.16791895E-01

Vector mean speed 0.0105
Vector Mean Direction 146.1

Maximum ten values									
Eastings					Northings				
0.054	0.051	0.051	0.048	0.045	0.073	0.070	0.065	0.054	0.050
0.043	0.041	0.038	0.030	0.028	0.035	0.033	0.031	0.028	0.026

Minimum ten values									
Eastings					Northings				
-0.013	-0.016	-0.016	-0.016	-0.017	-0.028	-0.028	-0.032	-0.032	-0.033
-0.019	-0.020	-0.024	-0.027	-0.027	-0.037	-0.038	-0.045	-0.054	-0.056

Maximum speeds									
0.078	0.077	0.072	0.070	0.064	0.062	0.056	0.055	0.054	0.052
0.052	0.048	0.045	0.043	0.042	0.040	0.037	0.037	0.037	0.036
0.036	0.033	0.033	0.033	0.033	0.032	0.032	0.032	0.032	0.030
0.030	0.029	0.029	0.028	0.028	0.028	0.028	0.028	0.028	0.027
0.027	0.027	0.027	0.027	0.027	0.027	0.026	0.026	0.025	0.025
0.025	0.024	0.023	0.023	0.022	0.022	0.021	0.021	0.021	0.021
0.020	0.020	0.020	0.020	0.019	0.019	0.019	0.018	0.018	0.016
0.016	0.015	0.014	0.014	0.013	0.013	0.013	0.013	0.012	0.012
0.012	0.012	0.011	0.011	0.010	0.009	0.008	0.007	0.007	0.006
0.004	0.004	0.004	0.004	0.001	0.000				

Variance ellipse statistics

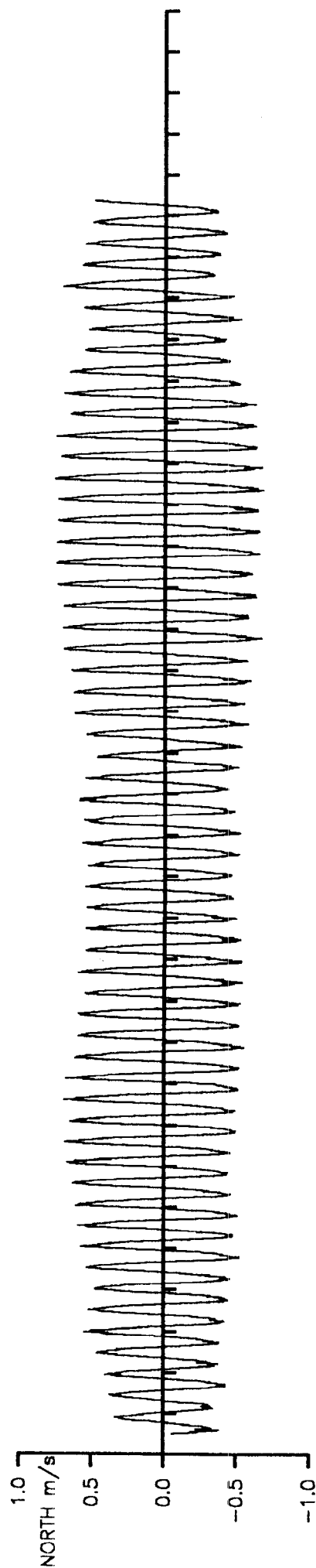
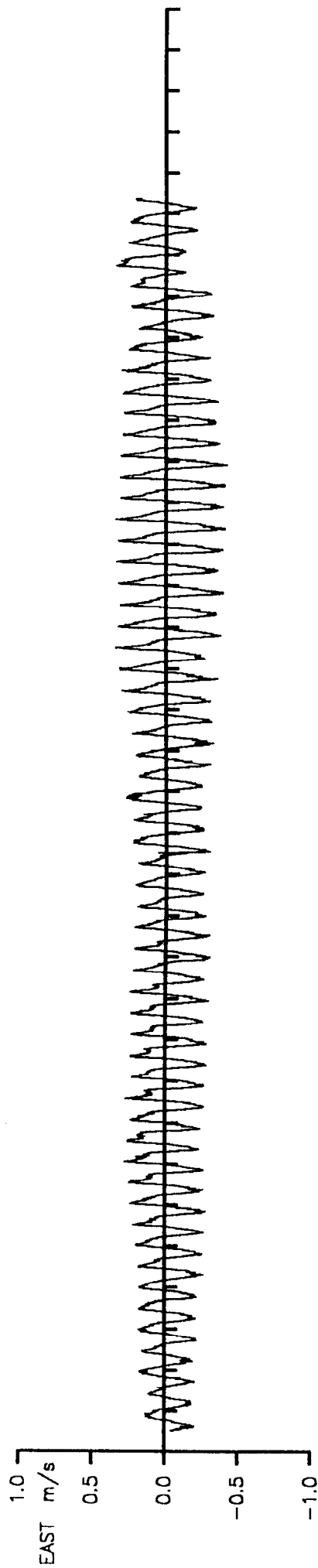
Maximum variance 0.7369E-03	Direction	30.0
Minimum variance 0.1682E-03	Direction	120.0
Total variance 0.9051E-03	Ratio of variances	0.2282E+00
Average direction. maxdir -PI/2 to maxdir +PI/2		17.3
Average direction. maxdir +PI/2 to maxdir -PI/2		152.7

Meter information details for 9347

Rig No	:	C39FC
Meter No	:	9347
Recording interval	:	600.0 seconds
Meter height from bottom	:	7.0 m
Position of meter on rig	:	B
Meter type	:	AS
Meter started	:	01-NOV-88 15:00:00
Meter stopped	:	02-DEC-88 14:00:00
Period switched on	:	31.0 days
Period of good data	:	29.8 days
Total number of scans	:	4298
Timing error	:	None
Comments	:	Pressure sensor indicates some instability on 16-NOV-88

VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 9347 Rig no. C39FC Depth of water(m) 30.0
Start/End 1988/11/02 AT 12:32:00 1988/12/02 AT 09:00:00
Position 52 37.02N 03 45.94E Meter Height(m) 7.0



2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6

88

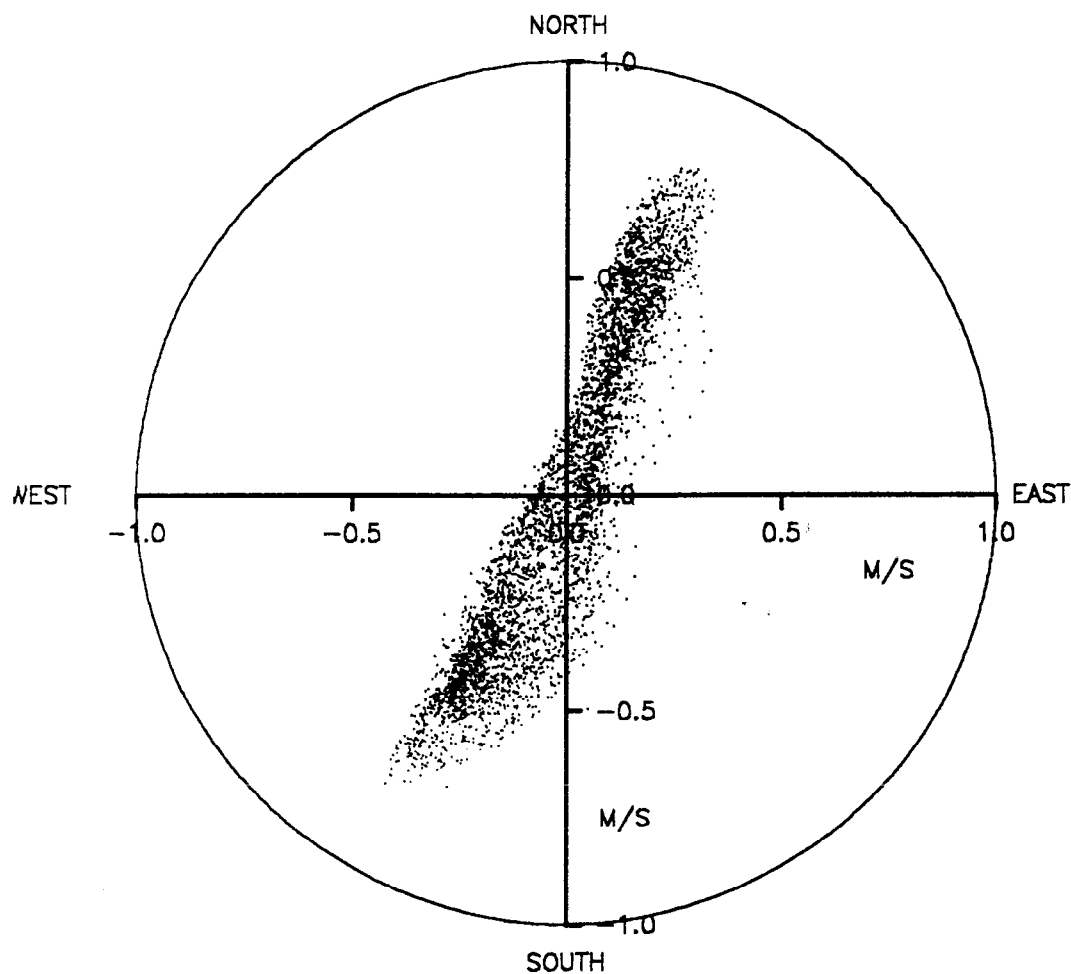
88

Nov

Dec

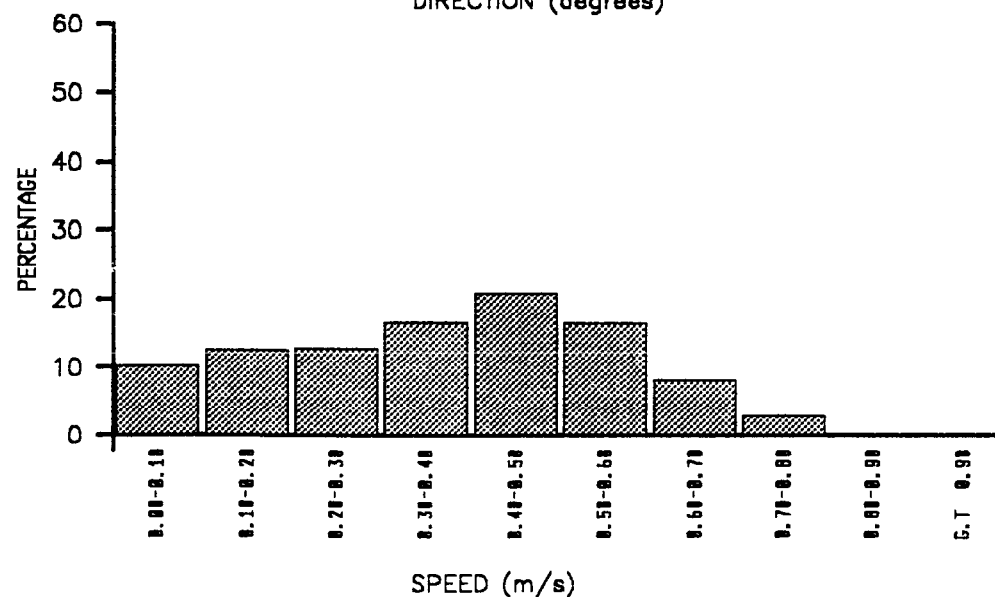
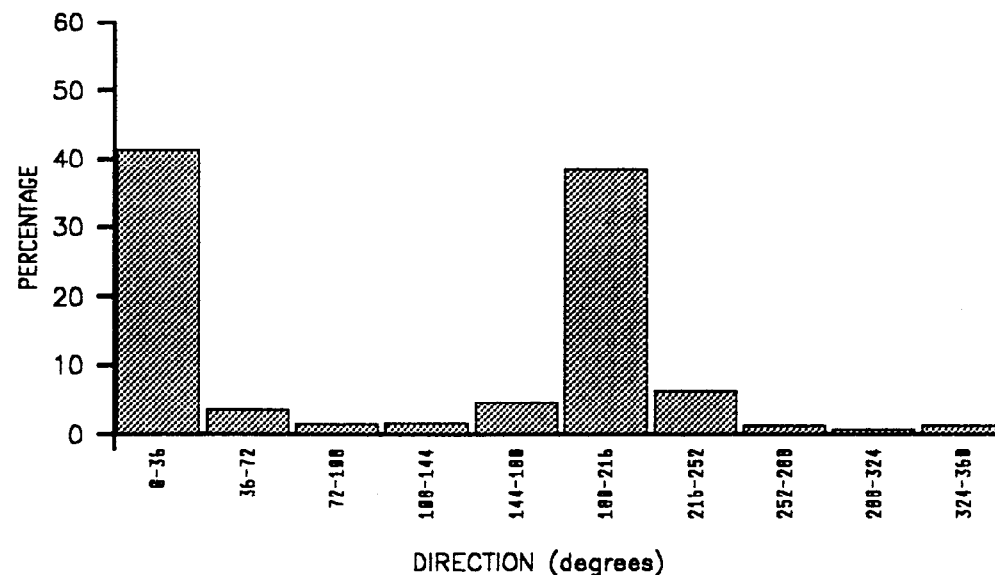
SCATTER PLOT

Meter no. 9347 Rig no. C39FC Depth of water(m) 30.0
 Start/End 1988/11/02 AT 12:32:00 1988/12/02 AT 09:00:00
 Position 52 37.02N 03 45.94E Meter Height(m) 7.0



HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 9347 Rig no. C39FC Depth of water(m) 30.0
 Start/End 1988/11/02 AT 12:32:00 1988/12/02 AT 09:00:00
 Position 52 37.02N 03 45.94E Meter Height(m) 7.0

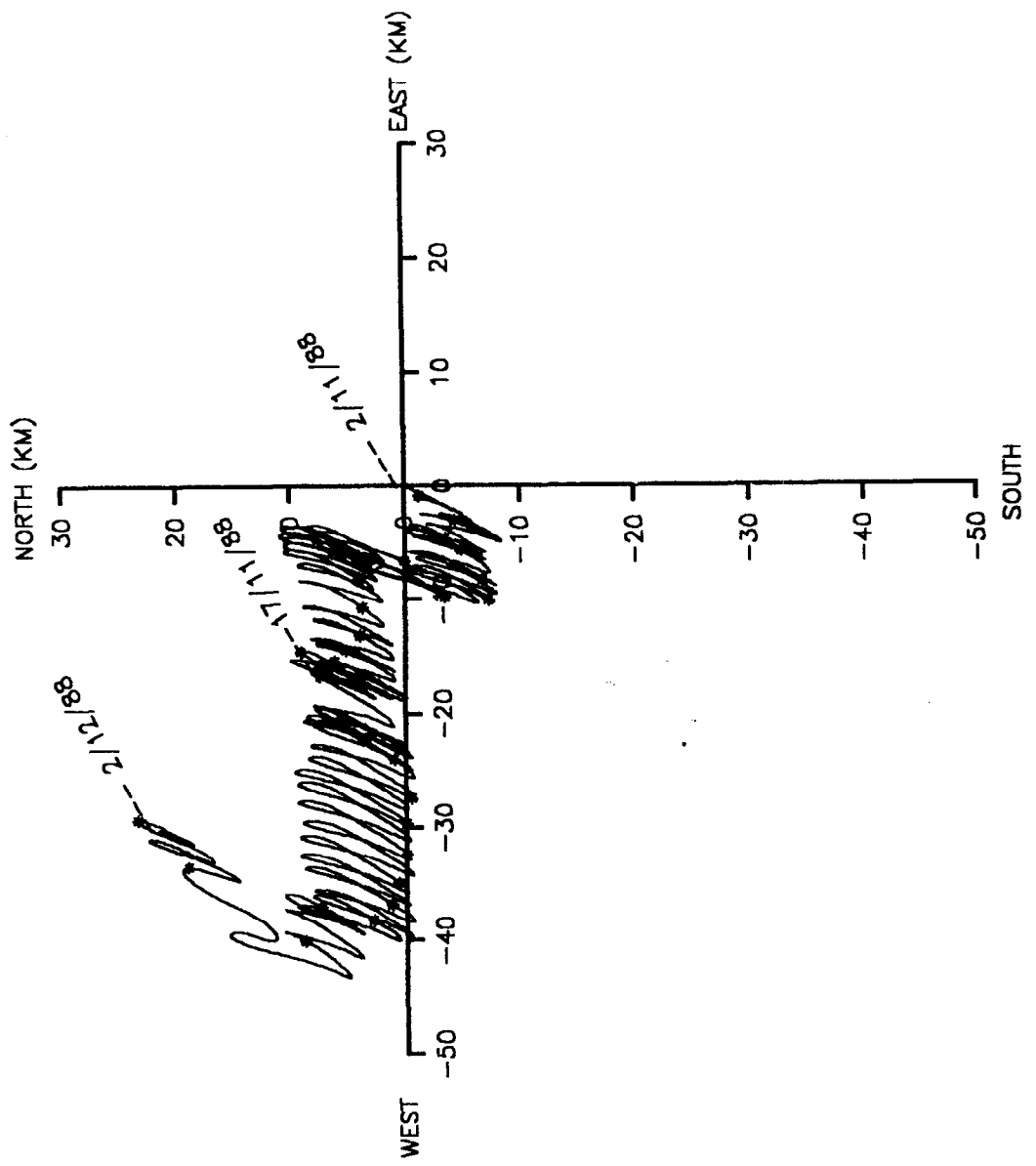


VECTOR PLOT

Meter no. 9347 Rig no. C39FC Depth of water(m) 30.0

Start/End 1988/11/02 AT 12:32:00 1988/12/02 AT 09:00:00

Position 52 37.02N 03 45.94E Meter Height(m) 7.0

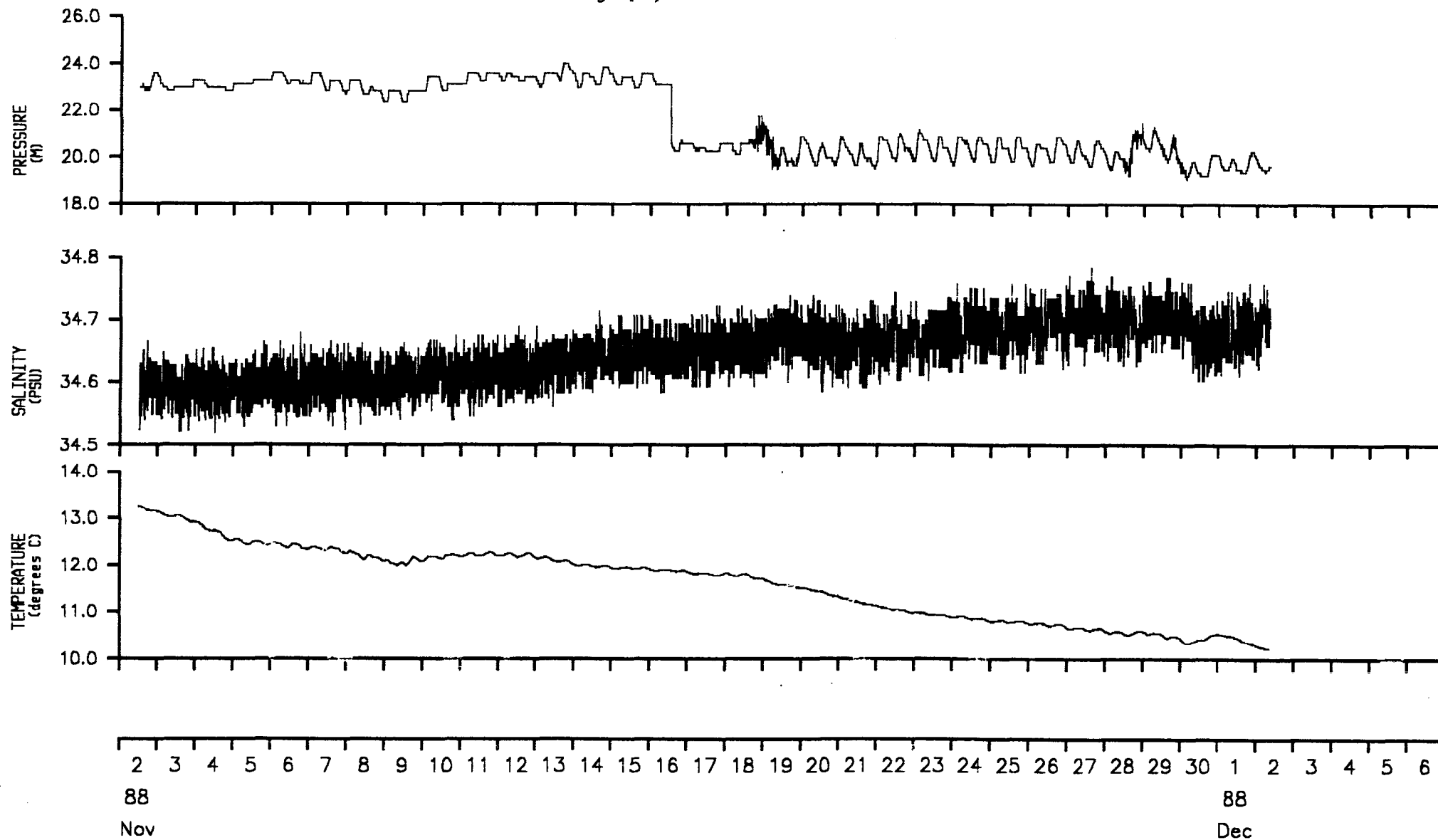


TEMPERATURE, SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9347 Rig no. C39FC Depth of water(m) 30.0

Start/End 1988/11/02 AT 12:32:00 1988/12/02 AT 09:00:00

Position 52 37.02N 03 45.94E Meter Height(m) 7.0



STATISTICS FOR AS9347B C39FCS A

	Mean	Variance	Standard deviation
Eastings	-0.0117	0.27969237E-01	0.16723996E+00
Northings	0.0084	0.14422685E+00	0.37977219E+00
Speed	0.3713	0.34514159E-01	0.18577987E+00

Vector mean speed 0.0144

Vector Mean Direction -54.4

Maximum ten values

Eastings					Northings				
0.340	0.339	0.337	0.335	0.332	0.753	0.751	0.746	0.745	0.743
0.322	0.320	0.320	0.320	0.317	0.742	0.742	0.736	0.735	0.734

Minimum ten values

Eastings					Northings				
-0.395	-0.395	-0.395	-0.395	-0.401	-0.636	-0.639	-0.639	-0.648	-0.651
-0.405	-0.406	-0.408	-0.409	-0.421	-0.651	-0.664	-0.666	-0.668	-0.676

Maximum speeds

0.810	0.801	0.799	0.799	0.799	0.793	0.793	0.793	0.790	0.790
0.790	0.778	0.778	0.778	0.775	0.775	0.775	0.775	0.769	0.769
0.767	0.767	0.767	0.767	0.764	0.764	0.764	0.764	0.761	0.761
0.761	0.761	0.761	0.758	0.758	0.758	0.755	0.755	0.755	0.752
0.752	0.752	0.752	0.749	0.749	0.746	0.743	0.743	0.740	0.740
0.737	0.737	0.737	0.737	0.737	0.737	0.735	0.735	0.735	0.735
0.735	0.735	0.735	0.732	0.732	0.729	0.729	0.729	0.729	0.729
0.729	0.729	0.729	0.726	0.726	0.726	0.726	0.723	0.723	0.723
0.723	0.720	0.720	0.720	0.717	0.717	0.717	0.717	0.717	0.717
0.717	0.714	0.714	0.714	0.714	0.711	0.711	0.711	0.708	0.708

Variance ellipse statistics

Maximum variance 0.1686E+00	Direction	22.6
Minimum variance 0.3581E-02	Direction	112.6
Total variance 0.1722E+00	Ratio of variances	0.2124E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		-0.5
Average direction. maxdir +PI/2 to maxdir -PI/2		180.7

STATISTICS FOR AS9347B C39FCSF A

	Mean	Variance	Standard deviation
Eastings	-0.0163	0.36029750E-03	0.18981501E-01
Northings	0.0051	0.41794567E-03	0.20443723E-01
Speed	0.0291	0.21775426E-03	0.14756497E-01

Vector mean speed 0.0171
 Vector Mean Direction -72.8

Maximum ten values									
Eastings					Northings				
0.038	0.037	0.030	0.030	0.019	0.070	0.068	0.061	0.056	0.049
0.018	0.018	0.015	0.013	0.013	0.046	0.043	0.041	0.039	0.038

Minimum ten values									
Eastings					Northings				
-0.037	-0.037	-0.039	-0.040	-0.041	-0.012	-0.012	-0.013	-0.013	-0.014
-0.042	-0.042	-0.043	-0.049	-0.050	-0.014	-0.014	-0.027	-0.030	-0.035

Maximum speeds									
0.076	0.072	0.071	0.061	0.060	0.056	0.056	0.050	0.049	0.045
0.045	0.044	0.044	0.043	0.043	0.043	0.042	0.041	0.038	0.038
0.038	0.038	0.037	0.037	0.037	0.037	0.036	0.035	0.034	0.033
0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.032	0.031	0.031
0.030	0.030	0.030	0.029	0.029	0.028	0.028	0.027	0.027	0.027
0.027	0.027	0.027	0.026	0.026	0.025	0.025	0.024	0.024	0.024
0.024	0.024	0.023	0.023	0.022	0.022	0.022	0.022	0.021	0.021
0.020	0.019	0.019	0.017	0.017	0.016	0.016	0.016	0.016	0.015
0.015	0.015	0.014	0.014	0.013	0.011	0.010	0.010	0.008	0.008
0.008	0.008	0.008	0.007	0.006	0.005				

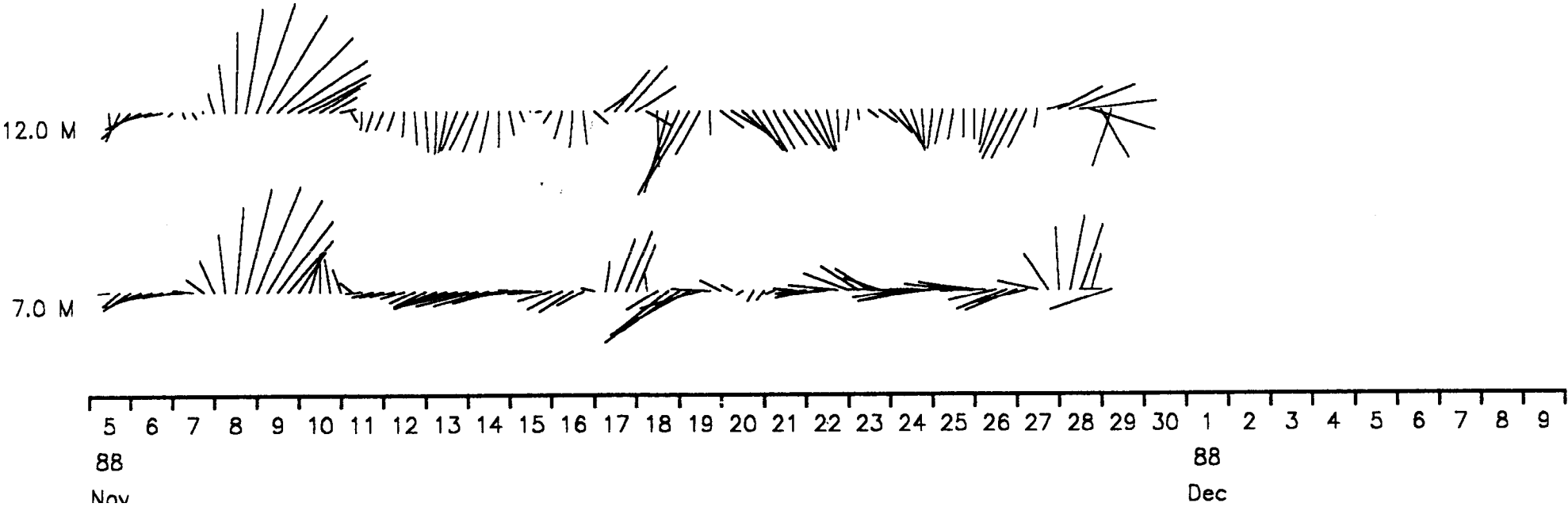
Variance ellipse statistics

Maximum variance 0.7111E-03	Direction	42.4
Minimum variance 0.6718E-04	Direction	132.4
Total variance 0.7782E-03	Ratio of variances	0.9447E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		-32.6
Average direction. maxdir +PI/2 to maxdir -PI/2		218.5

STICK TIME SERIES PLOT

Rig no. C39FC Depth of water(m) 30.0
Start/End 1988/11/02 AT 12:32:00 1988/12/02 AT 09:00:00
Position 52 37.02N 03 45.94E
Filtered Series Scale 0.1 m/s —————

Meter No.	Meter Height
9347	7.0 M
1117	12.0 M



Rig information details for C43FC

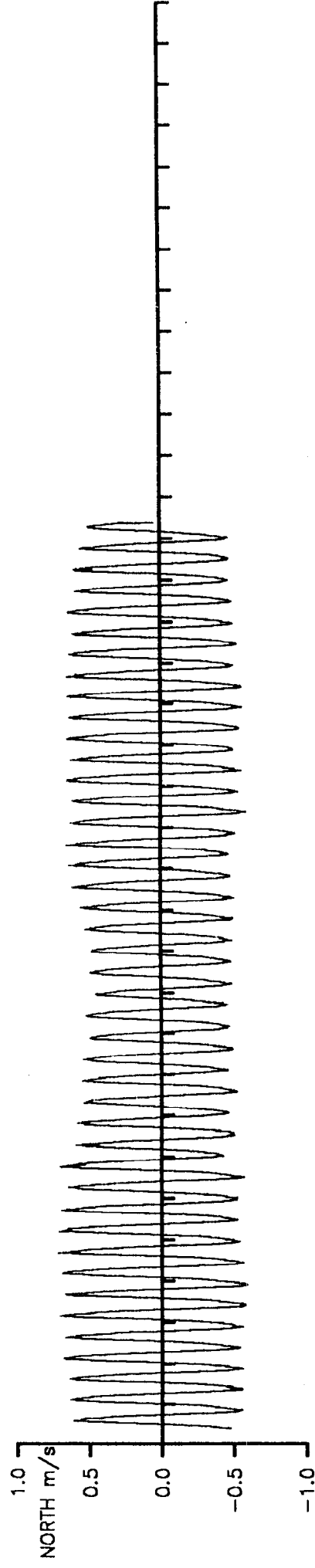
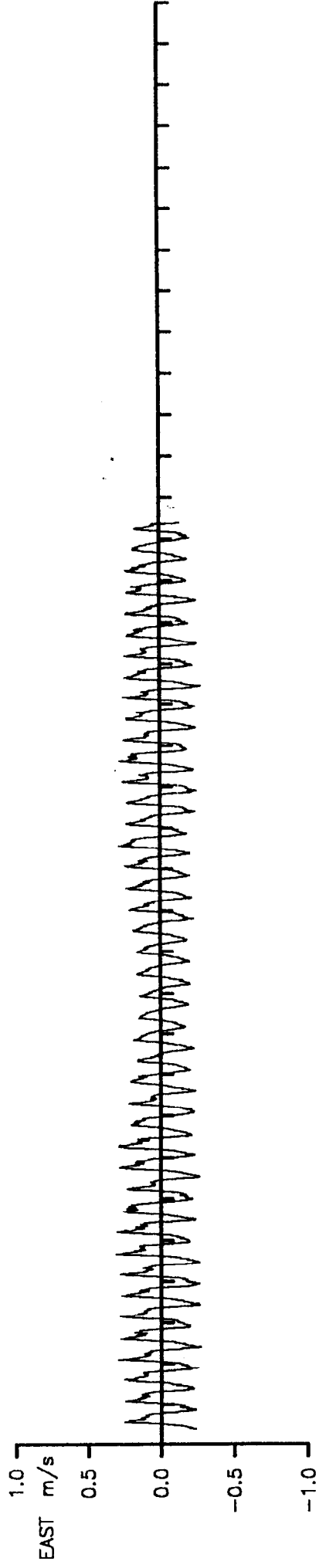
Position Latitude	:	52 37.10N
Position Longitude	:	03 45.50E
Water depth	:	30.0 m
Deployed on cruise	:	C43
Recovered on cruise	:	C45
Site name identification	:	F
Magnetic deviation	:	3.1 degrees west
Rig deployed on	:	07-JAN-89 09:10:00
Rig recovered on	:	29-JAN-89 09:45:00
Period of deployment	:	22.0 days
Comments	:	No spar bouy left and damage to release

Meter information details for 1117

Rig No	:	C43FC
Meter No	:	1117
Recording interval	:	600.0 seconds
Meter height from bottom	:	12.0 m
Position of meter on rig	:	T
Meter type	:	S4
Meter started	:	06-JAN-89 12:55:00
Meter stopped	:	01-FEB-89 11:35:00
Period switched on	:	25.9 days
Period of good data	:	22.0 days
Total number of scans	:	3171
Timing error	:	None
Comments	:	Good record obtained

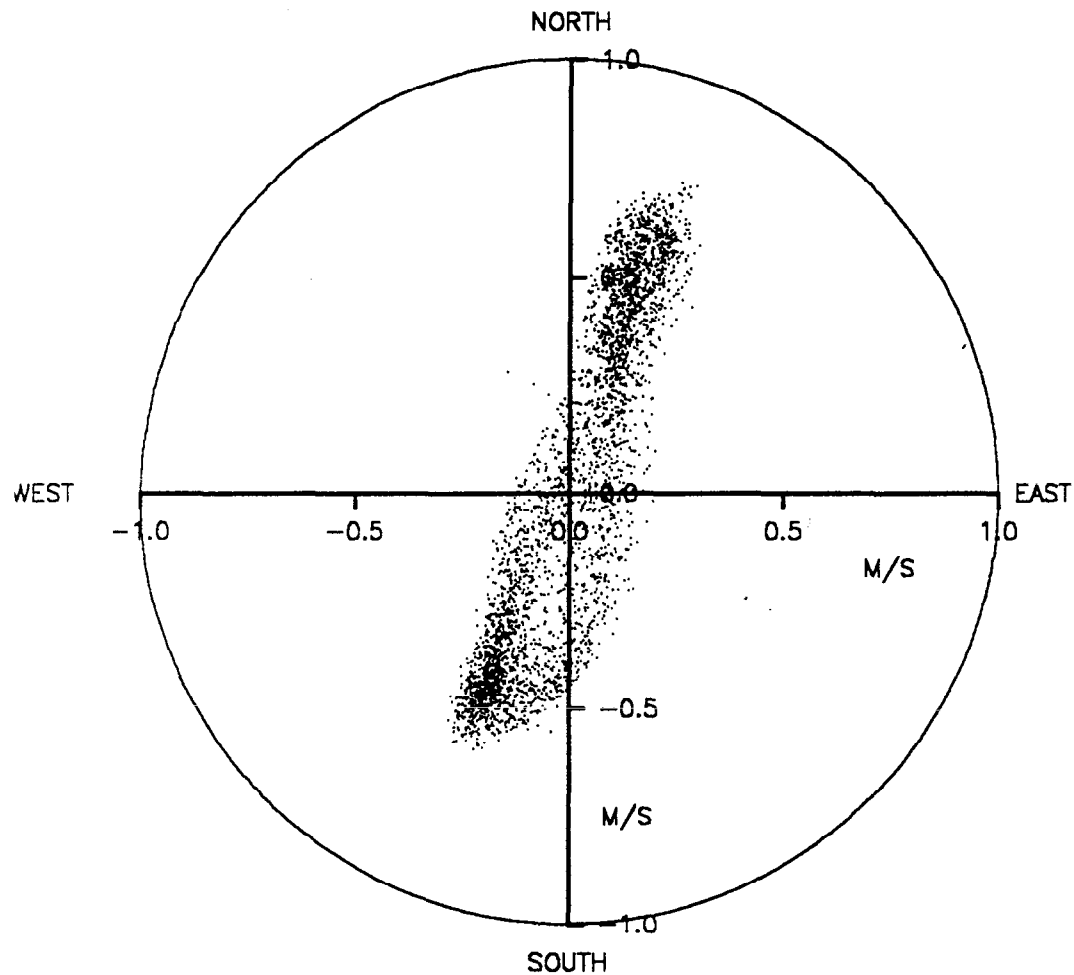
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 1117 Rig no. C43FC Depth of water(m) 30.0
Start/End 1989/01/07 AT 09:10:00 1989/01/29 AT 09:45:00
Position 52 37.10N 03 45.50E Meter Height(m) 12.0



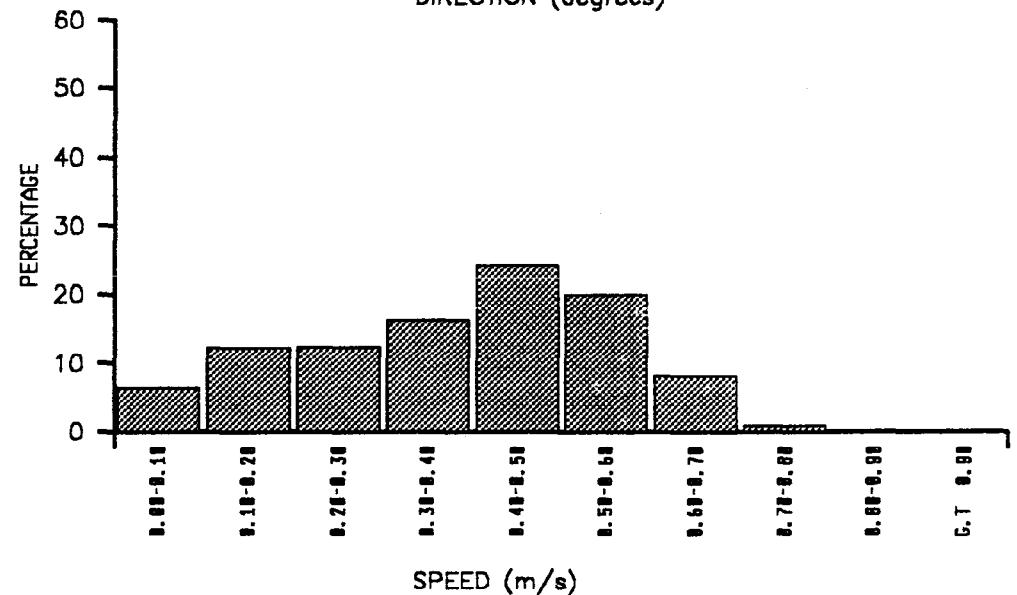
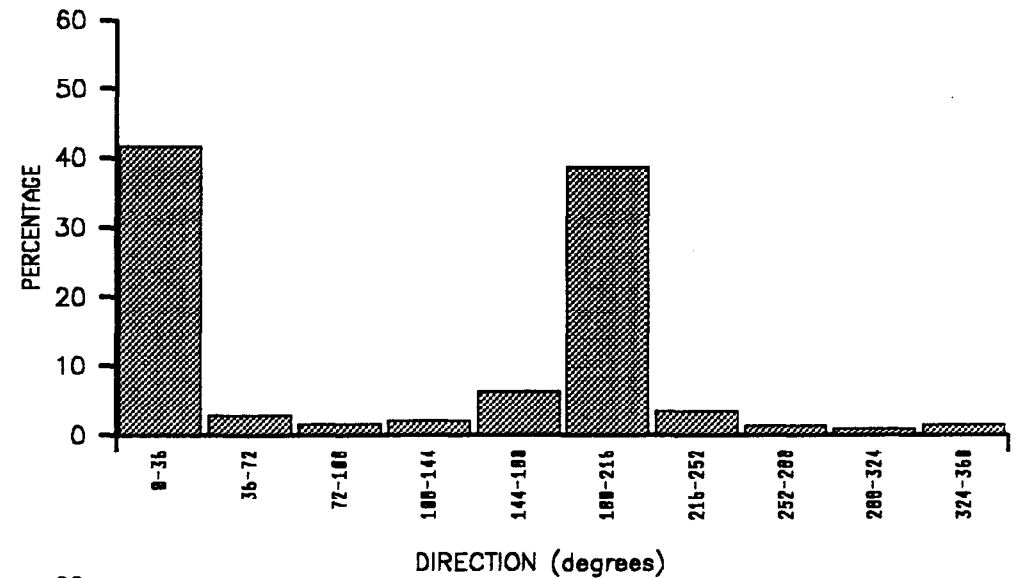
SCATTER PLOT

Meter no. 1117 Rig no. C43FC Depth of water(m) 30.0
 Start/End 1989/01/07 AT 09:10:00 1989/01/29 AT 09:45:00
 Position 52 37.10N 03 45.50E Meter Height(m) 12.0



HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1117 Rig no. C43FC Depth of water(m) 30.0
 Start/End 1989/01/07 AT 09:10:00 1989/01/29 AT 09:45:00
 Position 52 37.10N 03 45.50E Meter Height(m) 12.0

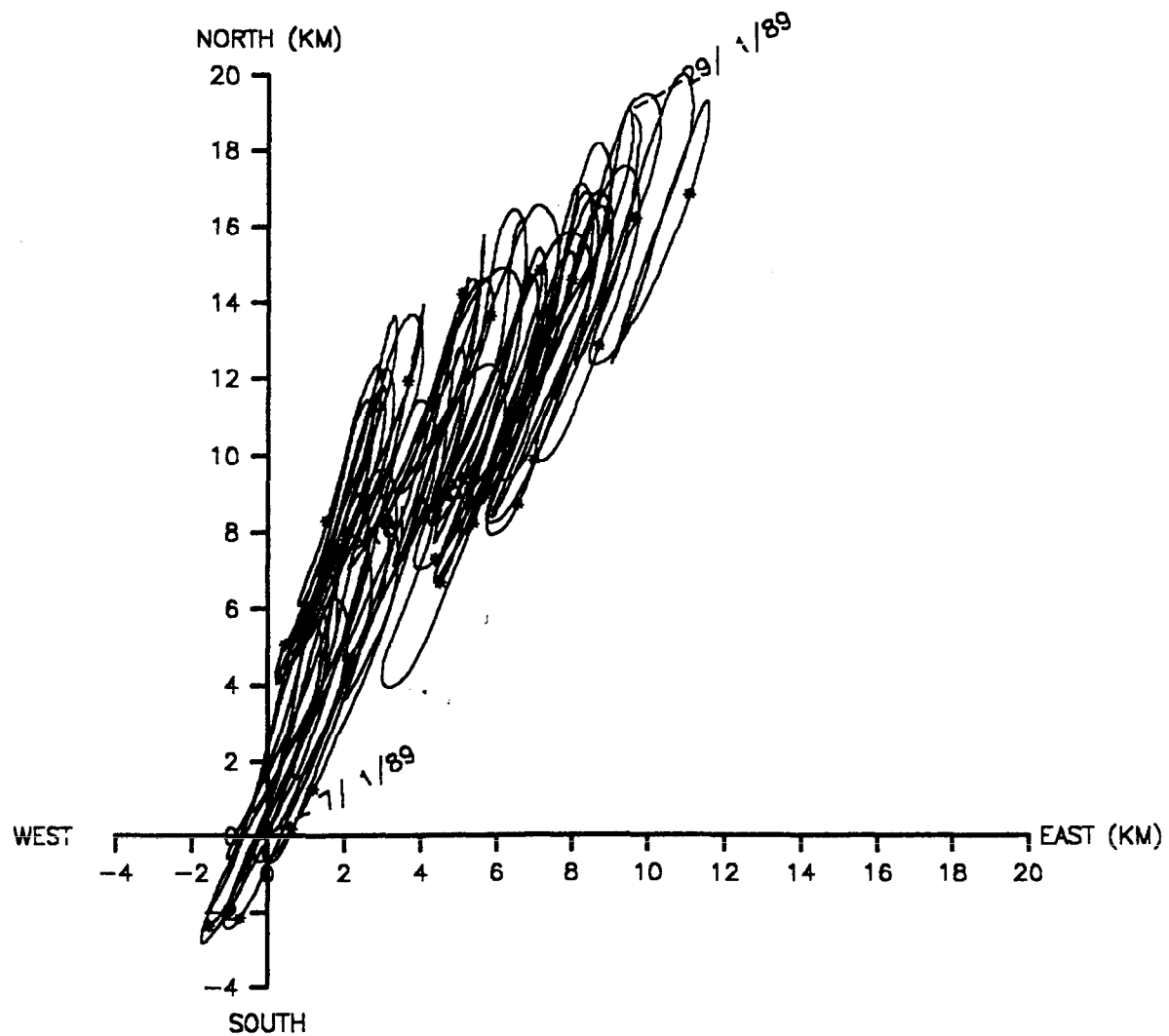


VECTOR PLOT

Meter no. 1117 Rig no. C43FC Depth of water(m) 30.0

Start/End 1989/01/07 AT 09:10:00 1989/01/29 AT 09:45:00

Position 52 37.10N 03 45.50E Meter Height(m) 12.0



STATISTICS FOR S41117T C43FCS A

	Mean	Variance	Standard deviation
Eastings	0.0051	0.20749051E-01	0.14404529E+00
Northings	0.0099	0.15575564E+00	0.39465892E+00
Speed	0.3843	0.28871410E-01	0.16991591E+00

Vector mean speed 0.0112
 Vector Mean Direction 27.1

Maximum ten values									
Eastings					Northings				
0.304	0.296	0.290	0.285	0.282	0.715	0.707	0.706	0.701	0.701
0.282	0.282	0.279	0.279	0.279	0.692	0.691	0.690	0.690	0.688

Minimum ten values									
Eastings					Northings				
-0.259	-0.261	-0.262	-0.264	-0.265	-0.574	-0.575	-0.577	-0.578	-0.579
-0.265	-0.268	-0.268	-0.271	-0.278	-0.584	-0.584	-0.586	-0.592	-0.593

Maximum speeds									
0.767	0.761	0.759	0.750	0.750	0.743	0.738	0.736	0.734	0.725
0.722	0.720	0.712	0.710	0.710	0.710	0.708	0.707	0.706	0.706
0.705	0.705	0.702	0.701	0.700	0.699	0.698	0.696	0.696	0.691
0.690	0.690	0.690	0.687	0.686	0.686	0.685	0.685	0.684	0.683
0.683	0.682	0.681	0.680	0.680	0.679	0.678	0.677	0.677	0.677
0.675	0.674	0.674	0.674	0.674	0.673	0.672	0.672	0.671	0.669
0.669	0.669	0.668	0.668	0.667	0.666	0.666	0.666	0.665	0.665
0.664	0.661	0.661	0.660	0.659	0.659	0.659	0.658	0.658	0.657
0.657	0.657	0.657	0.656	0.656	0.656	0.655	0.655	0.653	0.653
0.653	0.652	0.652	0.652	0.652	0.651	0.651	0.651	0.651	0.651

Variance ellipse statistics

Maximum variance 0.1727E+00	Direction	18.5
Minimum variance 0.3835E-02	Direction	108.5
Total variance 0.1765E+00	Ratio of variances	0.2221E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		1.7
Average direction. maxdir +PI/2 to maxdir -PI/2		178.7

STATISTICS FOR S41117T C43FCSF A

	Mean	Variance	Standard deviation
Eastings	0.0044	0.28996007E-03	0.17028216E-01
Northings	0.0067	0.30837418E-03	0.17560586E-01
Speed	0.0215	0.19493073E-03	0.13961762E-01

Vector mean speed 0.0081
 Vector Mean Direction 33.4

Maximum ten values									
Eastings					Northings				
0.045	0.044	0.035	0.035	0.034	0.052	0.048	0.041	0.037	0.037
0.033	0.033	0.032	0.026	0.026	0.037	0.034	0.032	0.030	0.029

Minimum ten values									
Eastings					Northings				
-0.012	-0.013	-0.013	-0.014	-0.014	-0.009	-0.011	-0.011	-0.012	-0.016
-0.014	-0.015	-0.021	-0.021	-0.024	-0.017	-0.021	-0.021	-0.024	-0.024

Maximum speeds									
0.056	0.053	0.052	0.050	0.050	0.048	0.048	0.045	0.043	0.040
0.038	0.035	0.033	0.031	0.030	0.027	0.026	0.026	0.026	0.025
0.025	0.025	0.024	0.022	0.022	0.021	0.020	0.018	0.018	0.018
0.017	0.017	0.017	0.017	0.015	0.015	0.015	0.015	0.015	0.015
0.014	0.014	0.014	0.013	0.013	0.012	0.012	0.012	0.012	0.012
0.011	0.011	0.011	0.011	0.011	0.010	0.009	0.008	0.007	0.006
0.006	0.006	0.004	0.003	0.002					

Variance ellipse statistics

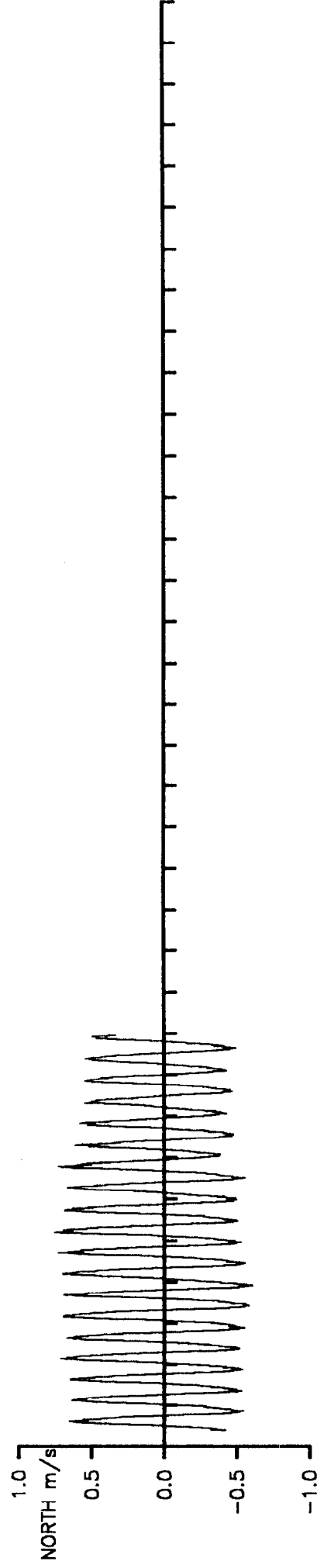
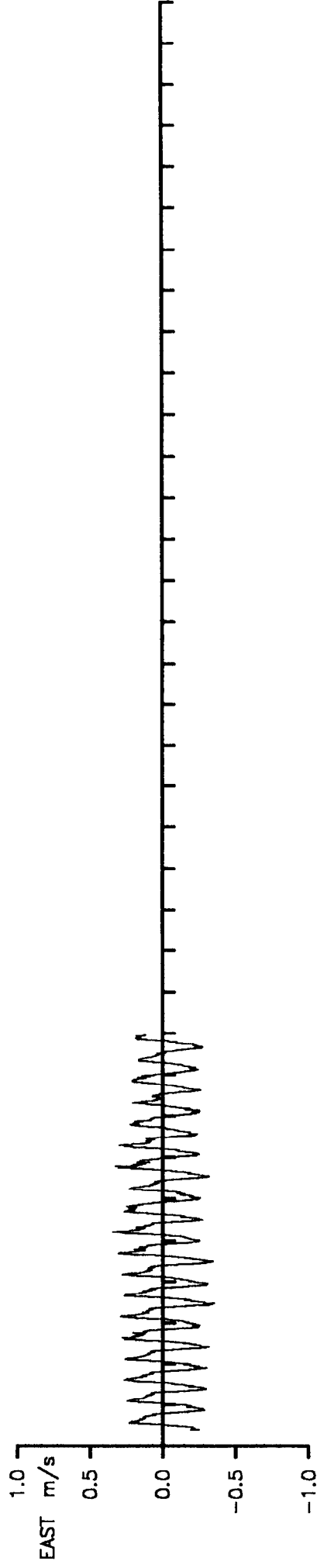
Maximum variance 0.4851E-03	Direction 43.6
Minimum variance 0.1132E-03	Direction 133.6
Total variance 0.5983E-03	Ratio of variances 0.2333E+00
Average direction. maxdir -PI/2 to maxdir +PI/2	-8.4
Average direction. maxdir +PI/2 to maxdir -PI/2	190.3

Meter information details for 9347

Rig No	:	C43FC
Meter No	:	9347
Recording interval	:	600.0 seconds
Meter height from bottom	:	7.0 m
Position of meter on rig	:	B
Meter type	:	AS
Meter started	:	06-JAN-89 18:35:00
Time of last valid scan	:	16-JAN-89 22:55:00
Period of good data	:	9.6 days short record
Total number of scans	:	1379
Timing error	:	None
Comments	:	Meter damaged on recovery by prop

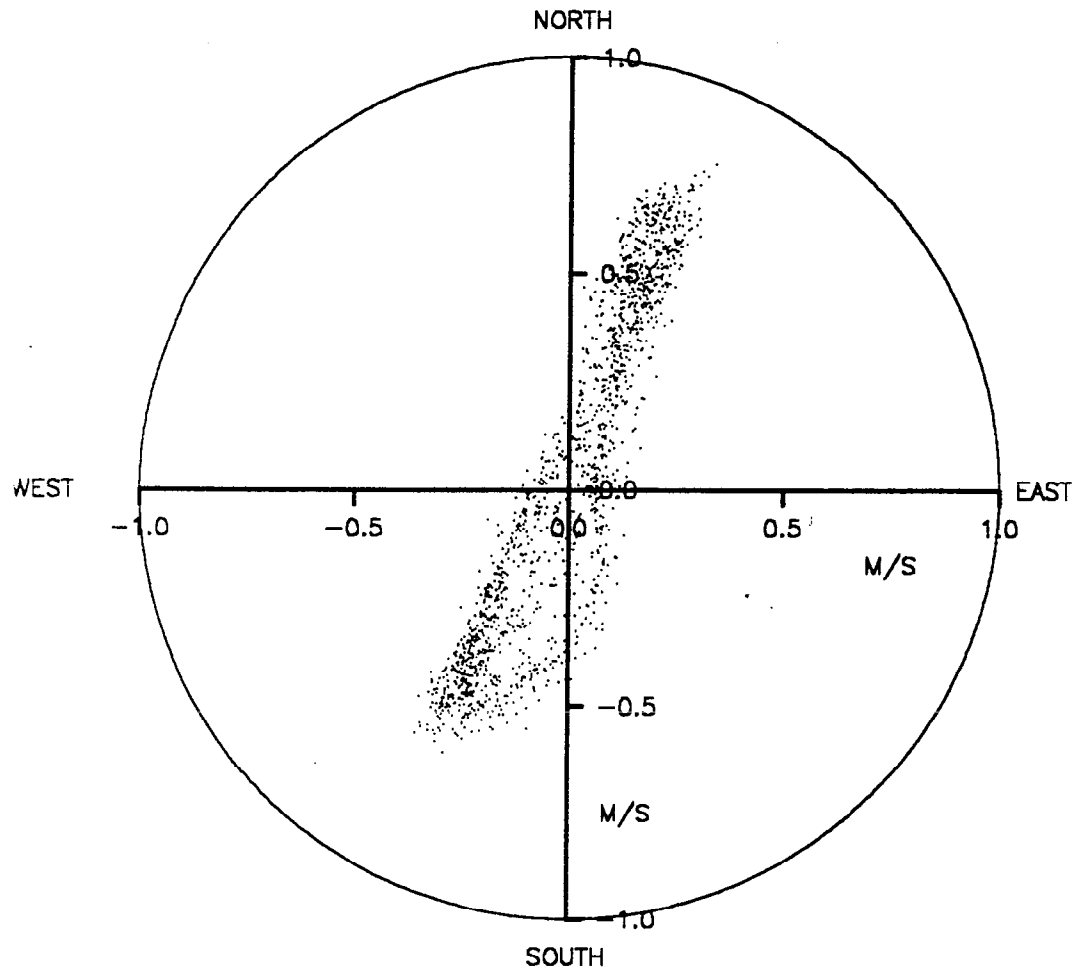
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 9347 Rig no. C43FC Depth of water(m) 30.0
Start/End 1989/01/07 AT 09:10:00 1989/01/29 AT 09:45:00
Position 52 37.10N 03 45.50E Meter Height(m) 7.0



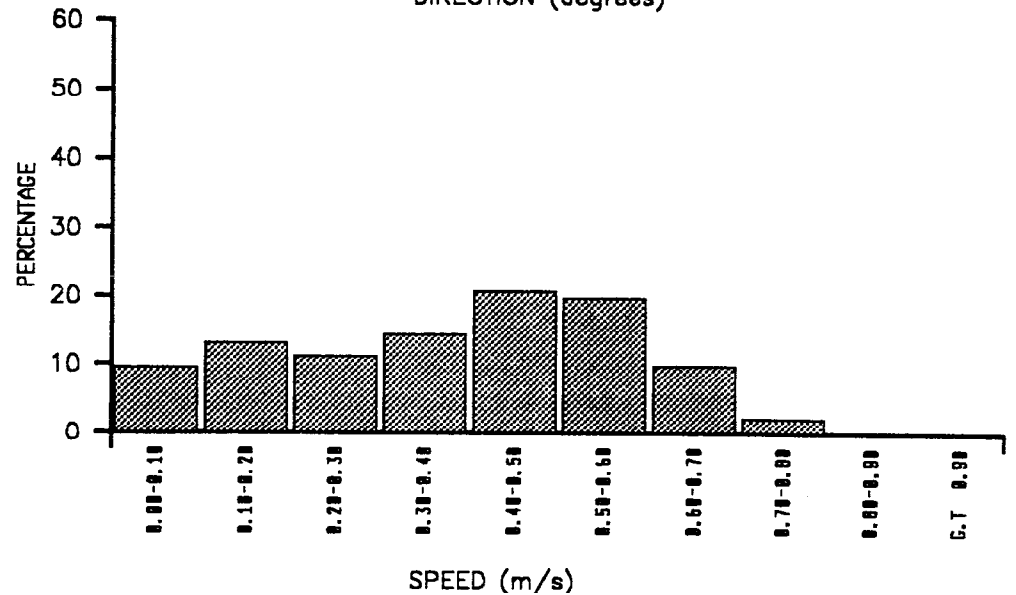
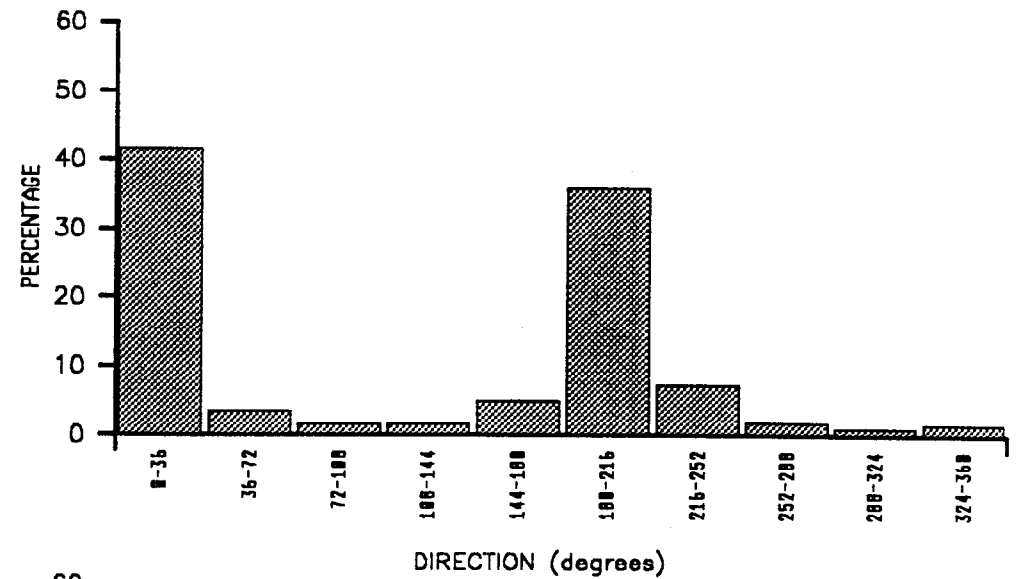
SCATTER PLOT

Meter no. 9347 Rig no. C43FC Depth of water(m) 30.0
 Start/End 1989/01/07 AT 09:10:00 1989/01/29 AT 09:45:00
 Position 52 37.10N 03 45.50E Meter Height(m) 7.0



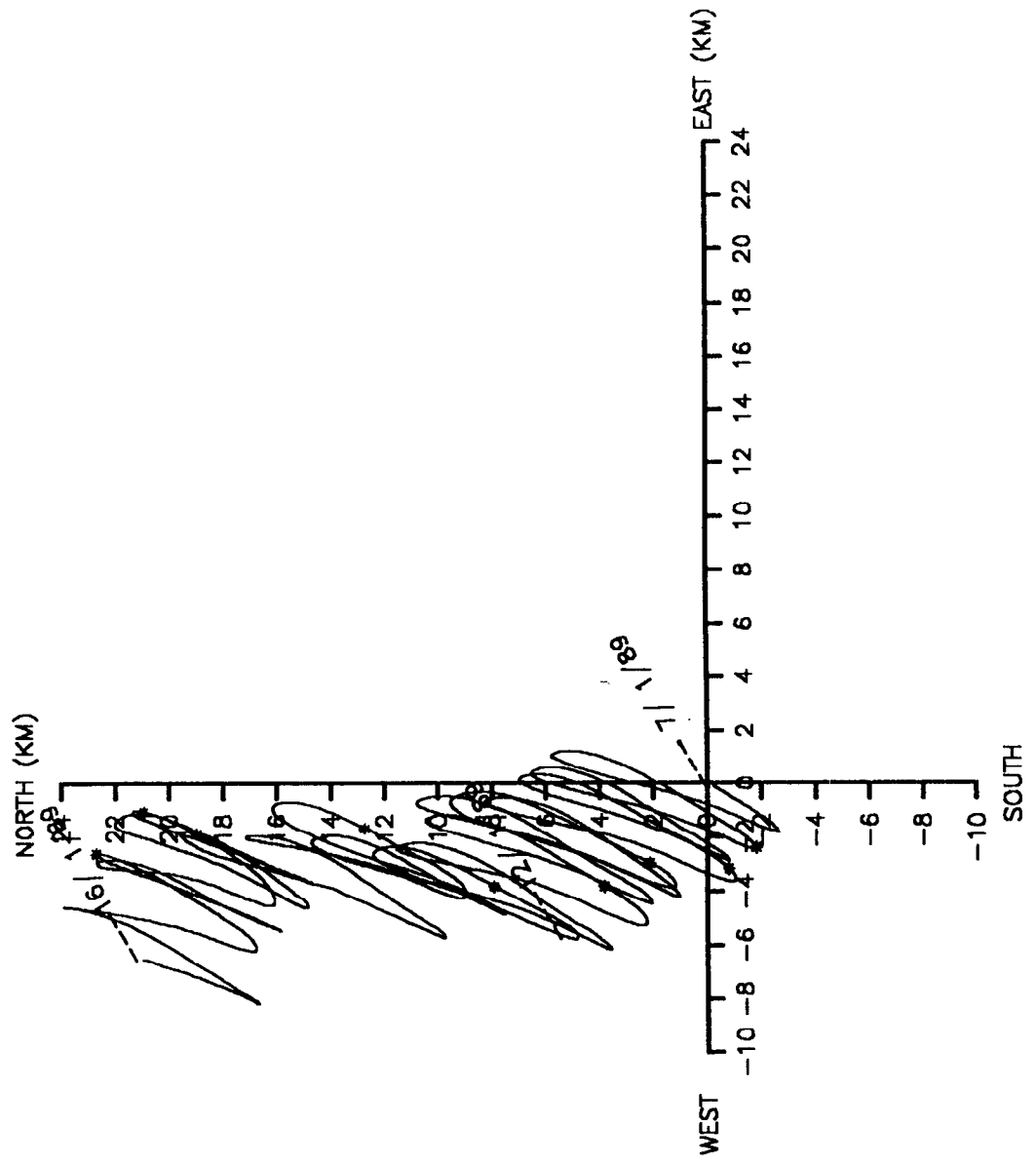
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 9347 Rig no. C43FC Depth of water(m) 30.0
 Start/End 1989/01/07 AT 09:10:00 1989/01/29 AT 09:45:00
 Position 52 37.10N 03 45.50E Meter Height(m) 7.0



VECTOR PLOT

Meter no. 9347 Rig no. C43FC Depth of water(m) 30.0
Start/End 1989/01/07 AT 09:10:00 1989/01/29 AT 09:45:00
Position 52 37.10N 03 45.50E Meter Height(m) 7.0

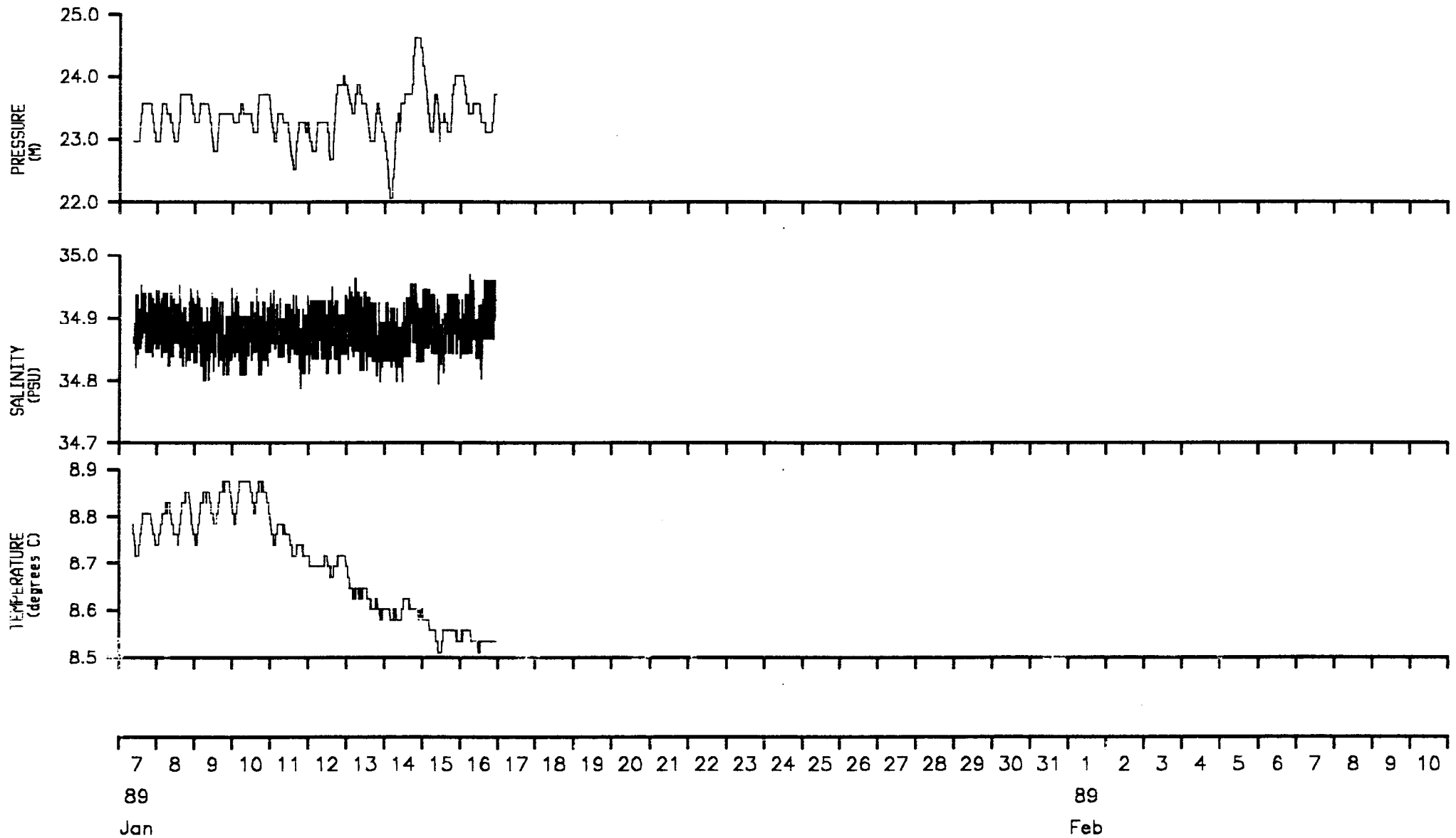


TEMPERATURE, SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9347 Rig no. C43FC Depth of water(m) 30.0

Start/End 1989/01/07 AT 09:10:00 1989/01/29 AT 09:45:00

Position 52 37.10N 03 45.50E Meter Height(m) 7.0



STATISTICS FOR AS9347B C43FCS A

	Mean	Variance	Standard deviation
Eastings	-0.0079	0.28173704E-01	0.16785014E+00
Northings	0.0253	0.15304101E+00	0.39120466E+00
Speed	0.3835	0.34779247E-01	0.18649197E+00

Vector mean speed 0.0265
 Vector Mean Direction -17.3

Maximum ten values									
Eastings					Northings				
0.339	0.322	0.310	0.302	0.302	0.752	0.736	0.726	0.725	0.707
0.302	0.298	0.296	0.289	0.286	0.707	0.705	0.702	0.702	0.696

Minimum ten values									
Eastings					Northings				
-0.316	-0.317	-0.317	-0.323	-0.325	-0.559	-0.559	-0.560	-0.562	-0.564
-0.325	-0.341	-0.344	-0.346	-0.355	-0.566	-0.570	-0.577	-0.582	-0.608

Maximum speeds									
0.825	0.799	0.793	0.781	0.767	0.761	0.758	0.749	0.749	0.743
0.743	0.740	0.737	0.729	0.729	0.726	0.723	0.720	0.717	0.717
0.714	0.714	0.714	0.714	0.714	0.708	0.708	0.706	0.706	0.700
0.697	0.697	0.694	0.694	0.694	0.694	0.691	0.691	0.691	0.688
0.688	0.688	0.688	0.685	0.685	0.685	0.685	0.682	0.682	0.682
0.679	0.679	0.676	0.676	0.676	0.676	0.676	0.674	0.674	0.674
0.671	0.671	0.671	0.671	0.668	0.668	0.668	0.668	0.668	0.665
0.665	0.665	0.665	0.665	0.662	0.662	0.662	0.662	0.659	0.659
0.659	0.659	0.659	0.656	0.656	0.653	0.653	0.653	0.650	0.650
0.650	0.647	0.647	0.647	0.645	0.645	0.645	0.645	0.642	0.642

Variance ellipse statistics

Maximum variance 0.1772E+00	Direction	21.9
Minimum variance 0.4026E-02	Direction	111.9
Total variance 0.1812E+00	Ratio of variances	0.2272E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		-0.6
Average direction. maxdir +PI/2 to maxdir -PI/2		182.5

STATISTICS FOR AS9347B C43FCSF A

	Mean	Variance	Standard deviation
Eastings	-0.0036	0.22280644E-03	0.14926698E-01
Northings	0.0320	0.35289349E-03	0.18785454E-01
Speed	0.0369	0.23239841E-03	0.15244614E-01

Vector mean speed 0.0322
 Vector Mean Direction -6.4

Maximum ten values					Northings				
Eastings									
0.022	0.019	0.016	0.007	0.007	0.065	0.059	0.048	0.044	0.043
0.002	-0.006	-0.006	-0.009	-0.010	0.043	0.035	0.032	0.029	0.025

Minimum ten values					Northings				
Eastings									
0.002	-0.006	-0.006	-0.009	-0.010	0.043	0.035	0.032	0.029	0.025
-0.014	-0.017	-0.018	-0.023	-0.023	0.024	0.014	0.007	0.007	0.004

Maximum speeds									
0.065	0.059	0.051	0.048	0.045	0.045	0.036	0.036	0.031	0.030
0.027	0.026	0.024	0.018	0.011					

Variance ellipse statistics

Maximum variance 0.4692E-03	Direction	34.5
Minimum variance 0.1065E-03	Direction	124.5
Total variance 0.5757E-03	Ratio of variances	0.2270E+00
Average direction. maxdir -PI/2 to maxdir +PI/2		-38.5
Average direction. maxdir +PI/2 to maxdir -PI/2		256.1

STICK TIME SERIES PLOT

Rig no. C43FC Depth of water(m) 30.0

Start/End 1989/01/07 AT 09:10:00 1989/01/29 AT 09:45:00

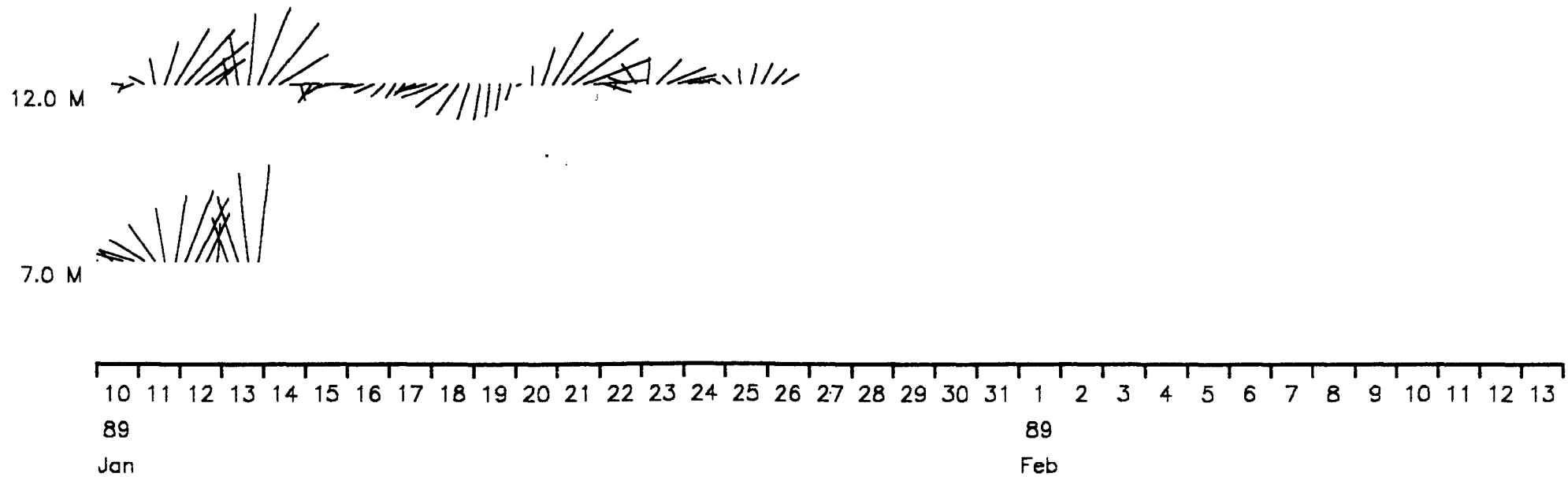
Position 52 37.10N 03 45.50E

Filtered Series Scale 0.1 m/s —————

Meter No. Meter Height

9347 7.0 M

1117 12.0 M



Rig information details for C51FC

Position Latitude	:	52 37.02N
Position Longitude	:	03 45.99E
Water depth	:	30.0 m
Deployed on cruise	:	C51
Recovered on cruise	:	C53
Site name identification	:	F
Magnetic deviation	:	3.1 degrees west
Rig deployed on	:	28-APR-89 10:41:00
Rig recovered on	:	27-MAY-89 06:30:00
Period of deployment	:	28.8 days
Comments	:	Launch and recovery successful

Meter information details for 1263

Rig No	:	C51FC
Meter No	:	1263
Recording interval	:	600.0 seconds
Meter height from bottom	:	12.0 m
Position of meter on rig	:	T
Meter type	:	S4
Comments	:	Meter did not record any data

Meter information details for 9347

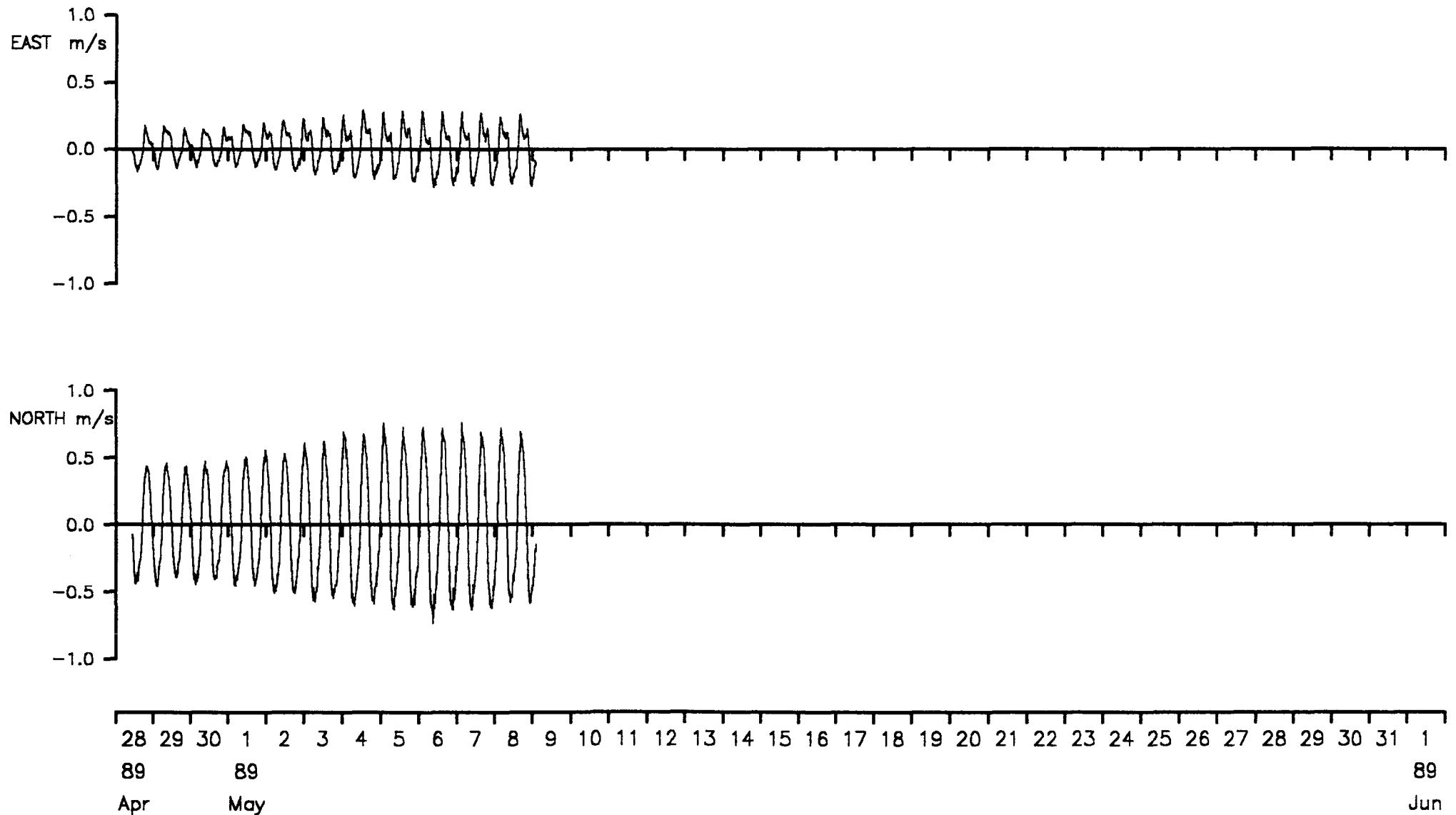
Rig No	:	C51FC
Meter No	:	9347
Recording interval	:	600.0 seconds
Meter height from bottom	:	7.0 m
Position of meter on rig	:	B
Meter type	:	AS
Meter started	:	27-APR-89 21:30:00
Time of last valid scan	:	09-MAY-89 02:20:00 N/E components
Time of last valid scan	:	27-MAY-89 05:10:00 T/C/P parameters
Period of good data	:	10.7 days short record for N/E
Period of good data	:	28.7 days short record for T/C/P
Timing error	:	None
Comments	:	Rotor clogged with fishing line
		Change in salinity signal on 9/10-MAY-89

VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 9347 Rig no. C51FC Depth of water(m) 30.0

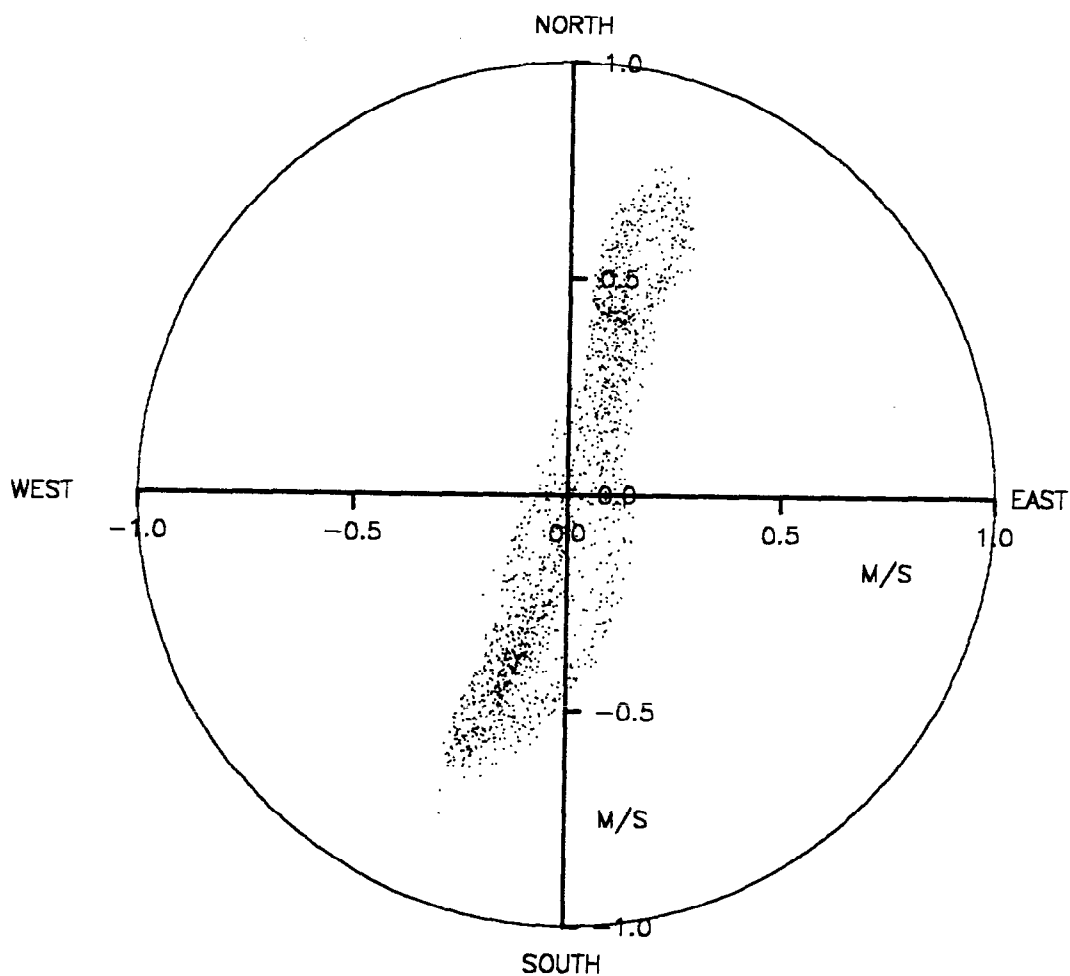
Start/End 1989/04/28 AT 10:41:00 1989/05/27 AT 06:30:00

Position 52 37.02N 03 45.99E Meter Height(m) 7.0



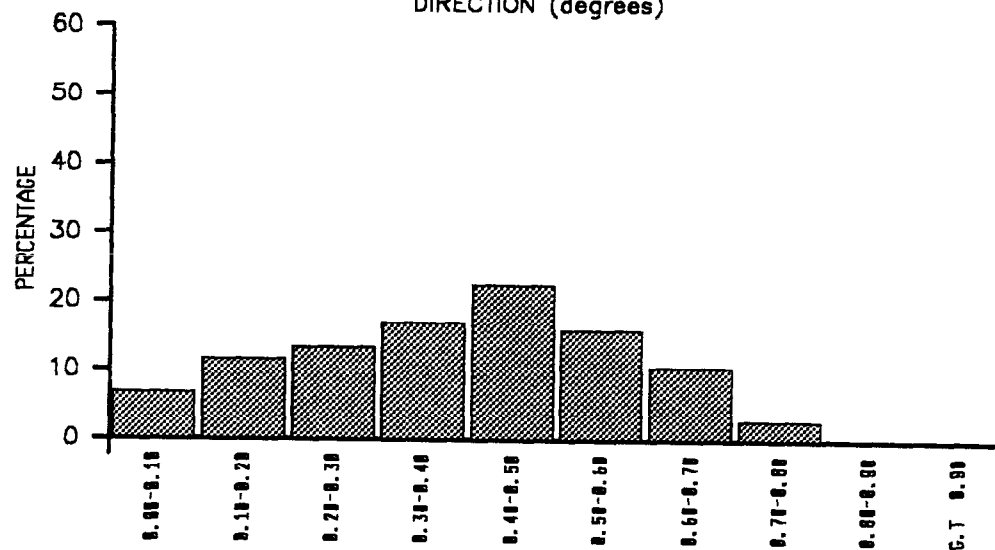
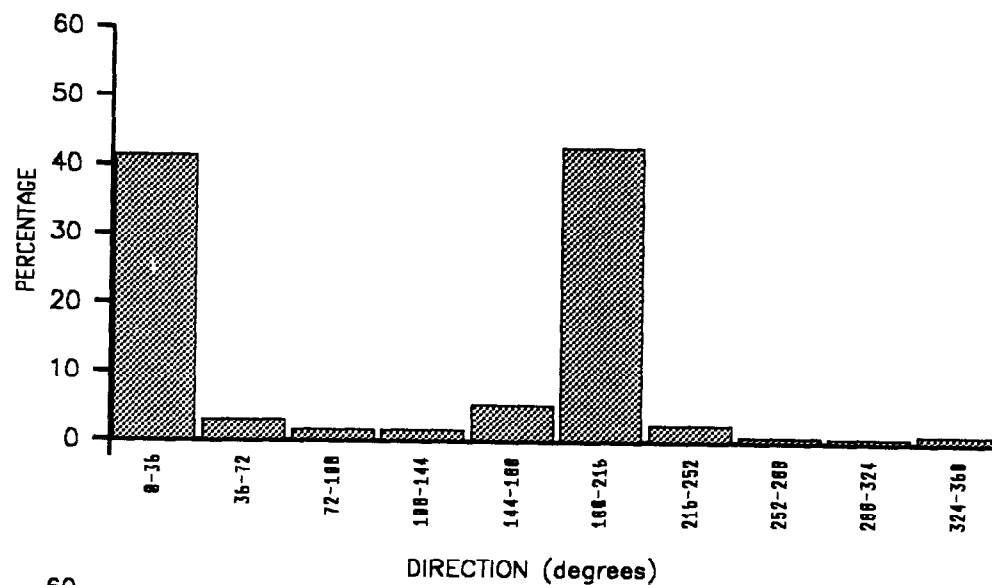
SCATTER PLOT

Meter no. 9347 Rig no. C51FC Depth of water(m) 30.0
 Start/End 1989/04/28 AT 10:41:00 1989/05/27 AT 06:30:00
 Position 52 37.02N 03 45.99E Meter Height(m) 7.0



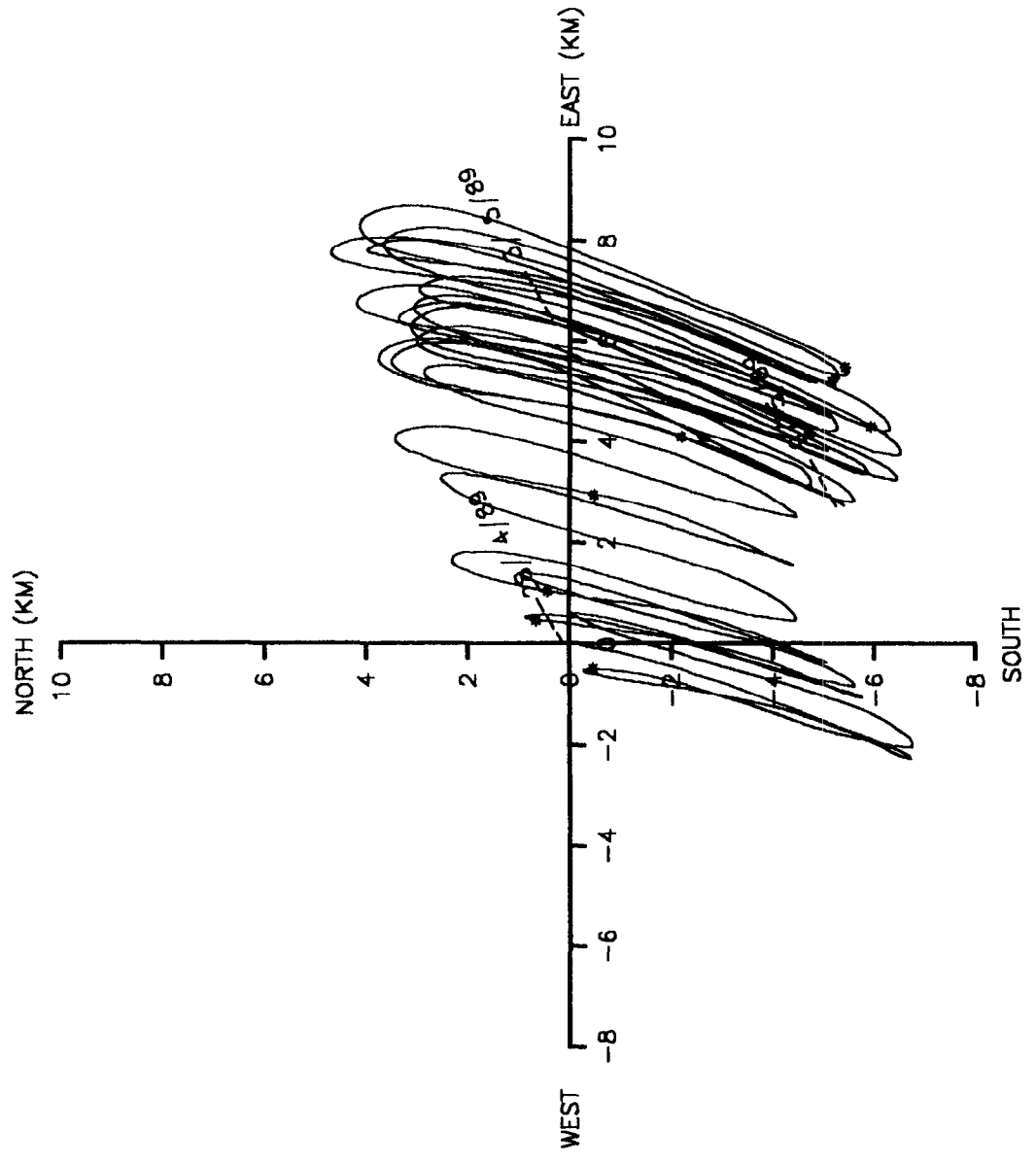
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 9347 Rig no. C51FC Depth of water(m) 30.0
 Start/End 1989/04/28 AT 10:41:00 1989/05/27 AT 06:30:00
 Position 52 37.02N 03 45.99E Meter Height(m) 7.0



VECTOR PLOT

Meter no. 9347 Rig no. C51FC Depth of water(m) 30.0
Start/End 1989/04/28 AT 10:41:00 1989/05/27 AT 06:30:00
Position 52 37.02N 03 45.99E Meter Height(m) 7.0



STATISTICS FOR AS9347B C51FCS A

	Mean	Variance	Standard deviation
Eastings	0.0030	0.18548291E-01	0.13619208E+00
Northings	-0.0059	0.16603434E+00	0.40747309E+00
Speed	0.3901	0.32338452E-01	0.17982894E+00

Vector mean speed 0.0066

Vector Mean Direction 153.1

Maximum ten values

Eastings					Northings				
0.285	0.285	0.280	0.278	0.278	0.758	0.753	0.751	0.747	0.736
0.278	0.275	0.273	0.273	0.272	0.725	0.725	0.719	0.718	0.716

Minimum ten values

Eastings					Northings				
-0.264	-0.267	-0.268	-0.270	-0.270	-0.626	-0.626	-0.632	-0.632	-0.633
-0.270	-0.274	-0.280	-0.289	-0.290	-0.634	-0.654	-0.658	-0.688	-0.741

Maximum speeds

0.796	0.793	0.784	0.781	0.778	0.775	0.761	0.755	0.752	0.752
0.749	0.746	0.746	0.746	0.743	0.740	0.740	0.737	0.735	0.735
0.732	0.732	0.729	0.729	0.726	0.726	0.723	0.723	0.723	0.723
0.720	0.717	0.717	0.714	0.714	0.711	0.708	0.708	0.706	0.706
0.706	0.706	0.703	0.700	0.700	0.697	0.697	0.694	0.694	0.691
0.688	0.688	0.688	0.688	0.688	0.688	0.688	0.685	0.685	0.682
0.682	0.682	0.682	0.682	0.682	0.682	0.682	0.679	0.679	0.679
0.679	0.679	0.676	0.676	0.676	0.676	0.676	0.676	0.676	0.676
0.674	0.674	0.674	0.671	0.671	0.671	0.668	0.668	0.668	0.665
0.665	0.665	0.662	0.662	0.662	0.659	0.659	0.659	0.659	0.653

Variance ellipse statistics

Maximum variance 0.1811E+00	Direction	17.0
Minimum variance 0.3434E-02	Direction	107.0
Total variance 0.1846E+00	Ratio of variances	0.1896E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		2.9
Average direction. maxdir +PI/2 to maxdir -PI/2		177.7

STATISTICS FOR AS9347B C51FCSF A

	Mean	Variance	Standard deviation
Eastings	0.0130	0.78769110E-04	0.88751949E-02
Northings	0.0005	0.33940727E-04	0.58258660E-02
Speed	0.0153	0.43123218E-04	0.65668263E-02

Vector mean speed 0.0130
 Vector Mean Direction 87.9

Maximum ten values									
Eastings					Northings				
0.027	0.026	0.025	0.023	0.020	0.011	0.006	0.006	0.006	0.005
0.017	0.015	0.013	0.012	0.012	0.004	0.003	0.002	0.001	0.000

Minimum ten values									
Eastings					Northings				
0.012	0.012	0.012	0.011	0.011	0.000	0.000	-0.001	-0.001	-0.002
0.010	0.007	0.004	-0.001	-0.008	-0.002	-0.003	-0.003	-0.008	-0.016

Maximum speeds									
0.028	0.027	0.025	0.023	0.020	0.017	0.017	0.015	0.013	0.013
0.013	0.013	0.012	0.012	0.012	0.011	0.009	0.009	0.004	

Variance ellipse statistics

Maximum variance 0.9640E-04	Direction 62.0
Minimum variance 0.1631E-04	Direction 152.0
Total variance 0.1127E-03	Ratio of variances 0.1691E+00
Average direction. maxdir -PI/2 to maxdir +PI/2	20.6
Average direction. maxdir +PI/2 to maxdir -PI/2	135.9

STICK TIME SERIES PLOT

Rig no. C51FC Depth of water(m) 30.0

Start/End 1989/04/28 AT 10:41:00 1989/05/27 AT 06:30:00

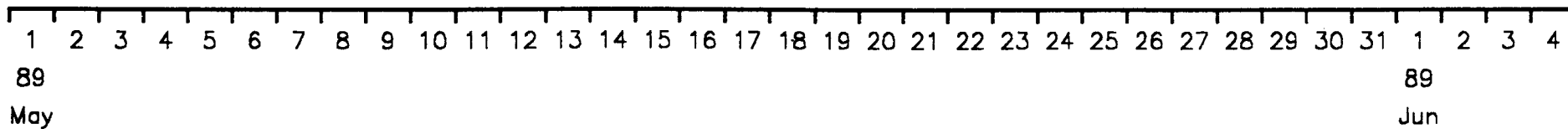
Position 52 37.02N 03 45.99E

Filtered Series Scale 0.1 m/s _____

Meter No. Meter Height

9347 7.0 M

7.0 M 



Rig information details for C53FC

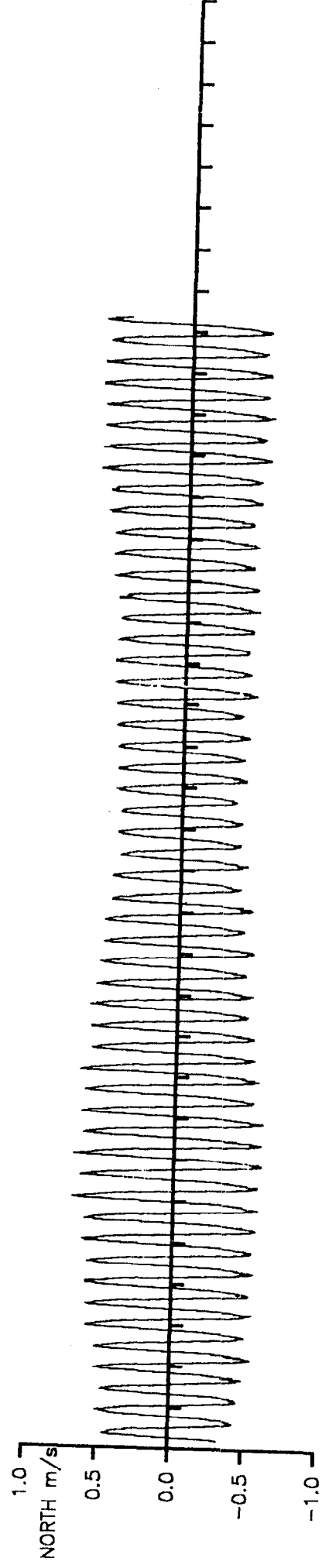
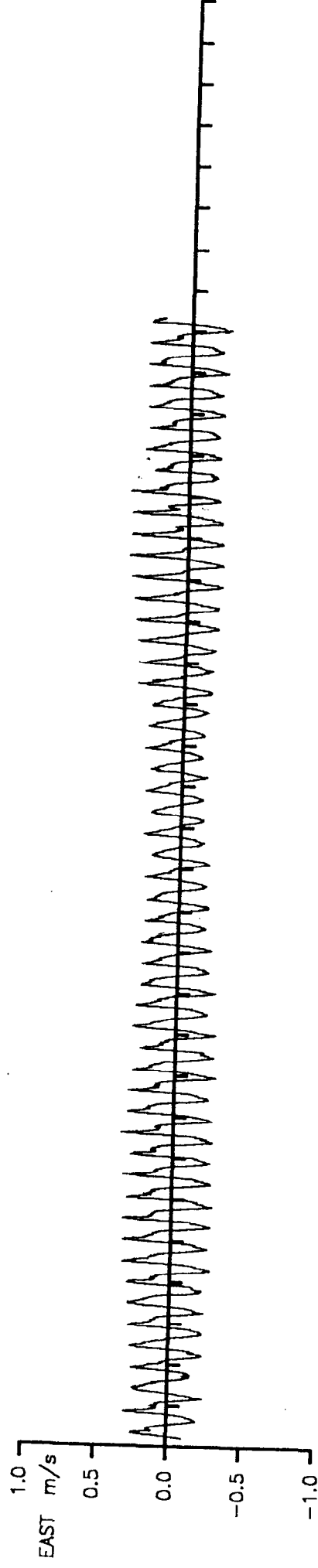
Position Latitude	:	52 36.94N
Position Longitude	:	03 46.14E
Water depth	:	30.0 m
Deployed on cruise	:	C53
Recovered on cruise	:	C55
Site name identification	:	F
Magnetic deviation	:	3.1 degrees west
Rig deployed on	:	29-MAY-89 05:08:00
Rig recovered on	:	25-JUNE-89 08:10:00
Period of deployment	:	27.1 days
Comments	:	Launch and recovery successful

Meter information details for 1119

Rig No	:	C53FC
Meter No	:	1119
Recording interval	:	600.0 seconds
Meter height from bottom	:	12.0 m
Position of meter on rig	:	T
Meter type	:	S4
Meter started	:	27-MAY-89 04:00:00
Meter stopped	:	25-JUNE-89 10:30:00
Period switched on	:	29.3 days
Period of good data	:	27.1 days
Total number of scans	:	3906
Timing error	:	None
Comments	:	Good record obtained

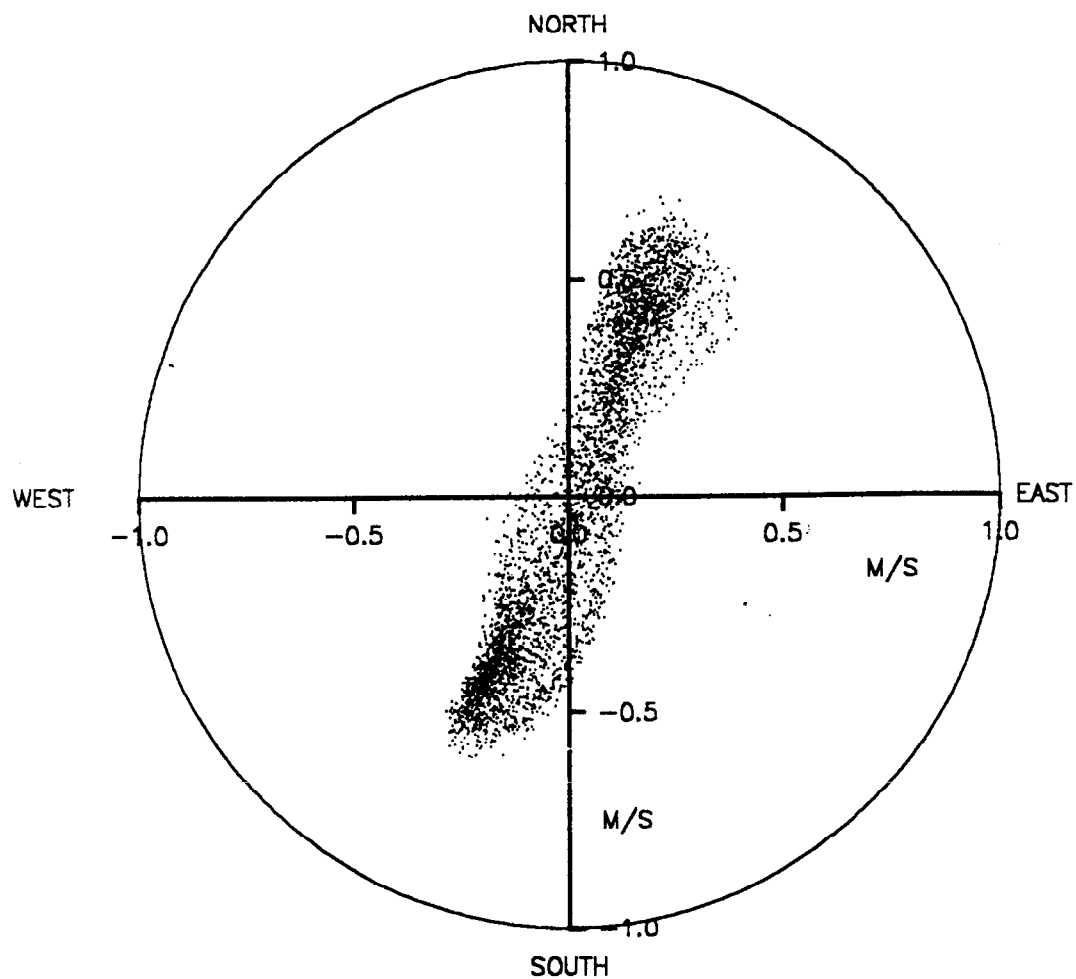
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 1119 Rig no. C53FC Depth of water(m) 30.0
Start/End 1989/05/29 AT 05:08:00 1989/06/25 AT 08:10:00
Position 52 36.94N 03 46.14E Meter Height(m) 12.0



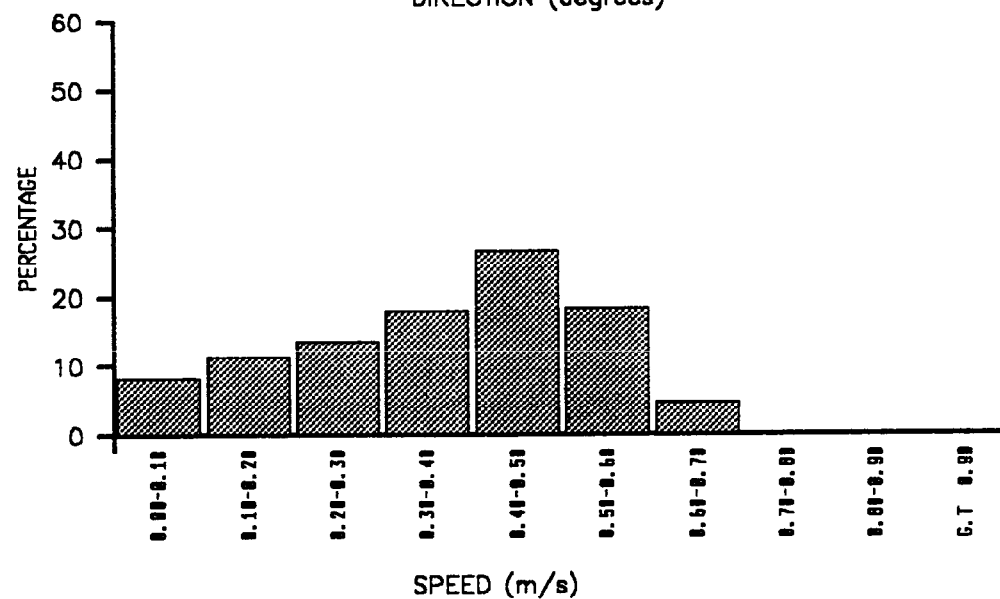
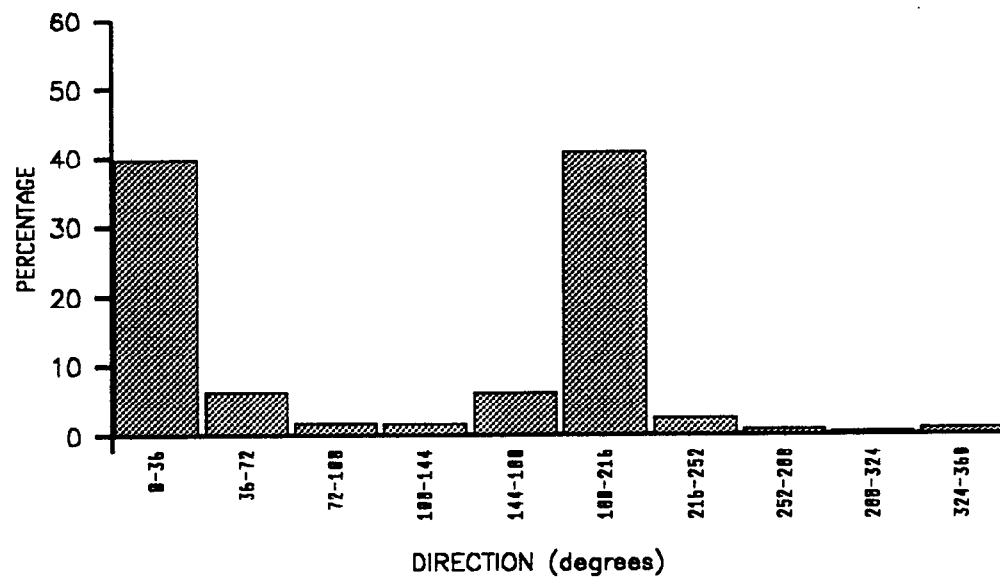
SCATTER PLOT

Meter no. 1119 Rig no. C53FC Depth of water(m) 30.0
 Start/End 1989/05/29 AT 05:08:00 1989/06/25 AT 08:10:00
 Position 52 36.94N 03 46.14E Meter Height(m) 12.0



HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1119 Rig no. C53FC Depth of water(m) 30.0
 Start/End 1989/05/29 AT 05:08:00 1989/06/25 AT 08:10:00
 Position 52 36.94N 03 46.14E Meter Height(m) 12.0

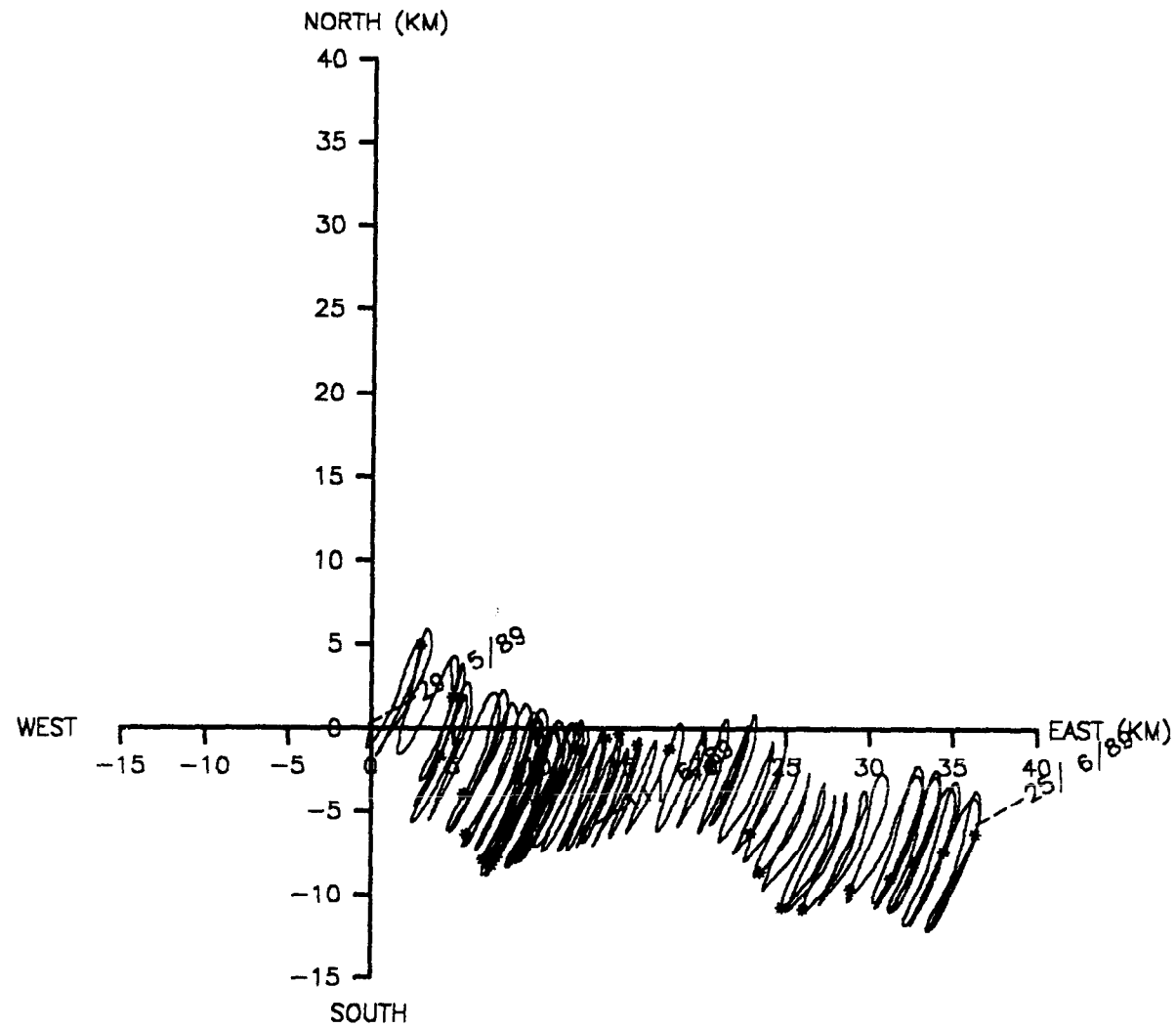


VECTOR PLOT

Meter no. 1119 Rig no. C53FC Depth of water(m) 30.0

Start/End 1989/05/29 AT 05:08:00 1989/06/25 AT 08:10:00

Position 52 36.94N 03 46.14E Meter Height(m) 12.0



STATISTICS FOR S41119T C53FCS A

	Mean	Variance	Standard deviation
Eastings	0.0156	0.24599016E-01	0.15684068E+00
Northings	-0.0026	0.13647491E+00	0.36942518E+00
Speed	0.3673	0.26376437E-01	0.16240829E+00

Vector mean speed 0.0158
Vector Mean Direction 99.6

Maximum ten values | Eastings | Northings | |----------|-----------| |----------|-----------|

0.392	0.390	0.387	0.381	0.377	0.687	0.681	0.673	0.657	0.650
0.375	0.374	0.374	0.374	0.373	0.650	0.650	0.644	0.642	0.639

Minimum ten values | Eastings | Northings | |----------|-----------| |----------|-----------|

-0.272	-0.273	-0.273	-0.274	-0.275	-0.578	-0.580	-0.581	-0.584	-0.584
-0.277	-0.277	-0.279	-0.279	-0.285	-0.593	-0.599	-0.599	-0.601	-0.605

Maximum speeds

0.730	0.720	0.709	0.693	0.693	0.691	0.689	0.686	0.684	0.682
0.680	0.679	0.679	0.679	0.678	0.675	0.673	0.671	0.668	0.663
0.662	0.660	0.659	0.658	0.657	0.656	0.655	0.655	0.653	0.652
0.651	0.651	0.650	0.649	0.648	0.648	0.647	0.646	0.646	0.645
0.645	0.645	0.645	0.644	0.644	0.644	0.643	0.642	0.642	0.642
0.641	0.640	0.640	0.640	0.640	0.640	0.640	0.640	0.639	0.638
0.638	0.637	0.637	0.637	0.637	0.636	0.636	0.635	0.635	0.634
0.634	0.634	0.634	0.633	0.633	0.633	0.633	0.632	0.631	0.631
0.631	0.631	0.631	0.630	0.630	0.629	0.629	0.628	0.628	0.627
0.627	0.627	0.626	0.626	0.626	0.625	0.625	0.624	0.624	0.624

Variance ellipse statistics

Maximum variance 0.1577E+00	Direction	21.8
Minimum variance 0.3397E-02	Direction	111.8
Total variance 0.1611E+00	Ratio of variances	0.2154E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		4.6
Average direction. maxdir +PI/2 to maxdir -PI/2		174.8

STATISTICS FOR S41119T C53FCSF A

	Mean	Variance	Standard deviation
Eastings	0.0152	0.10040616E-03	0.10020282E-01
Northings	-0.0028	0.73820207E-04	0.85918680E-02
Speed	0.0185	0.70038703E-04	0.83689094E-02

Vector mean speed 0.0155
 Vector Mean Direction 100.2

Maximum ten values									
Eastings					Northings				
0.037	0.036	0.035	0.034	0.034	0.012	0.012	0.011	0.010	0.010
0.033	0.032	0.031	0.031	0.029	0.009	0.009	0.009	0.009	0.009

Minimum ten values									
Eastings					Northings				
0.003	0.001	0.001	-0.002	-0.003	-0.014	-0.015	-0.015	-0.018	-0.018
-0.005	-0.005	-0.006	-0.006	-0.008	-0.018	-0.018	-0.021	-0.021	-0.022

Maximum speeds									
0.038	0.037	0.035	0.035	0.034	0.034	0.032	0.032	0.031	0.029
0.028	0.028	0.028	0.028	0.027	0.026	0.026	0.026	0.025	0.025
0.025	0.024	0.024	0.024	0.023	0.022	0.022	0.022	0.022	0.021
0.021	0.021	0.021	0.021	0.021	0.019	0.019	0.019	0.018	0.018
0.018	0.017	0.017	0.017	0.017	0.017	0.016	0.016	0.016	0.015
0.015	0.015	0.015	0.015	0.015	0.014	0.014	0.014	0.014	0.013
0.013	0.013	0.013	0.012	0.012	0.012	0.011	0.011	0.010	0.010
0.010	0.010	0.009	0.009	0.009	0.009	0.009	0.009	0.008	0.008
0.007	0.006	0.005	0.004	0.002					

Variance ellipse statistics

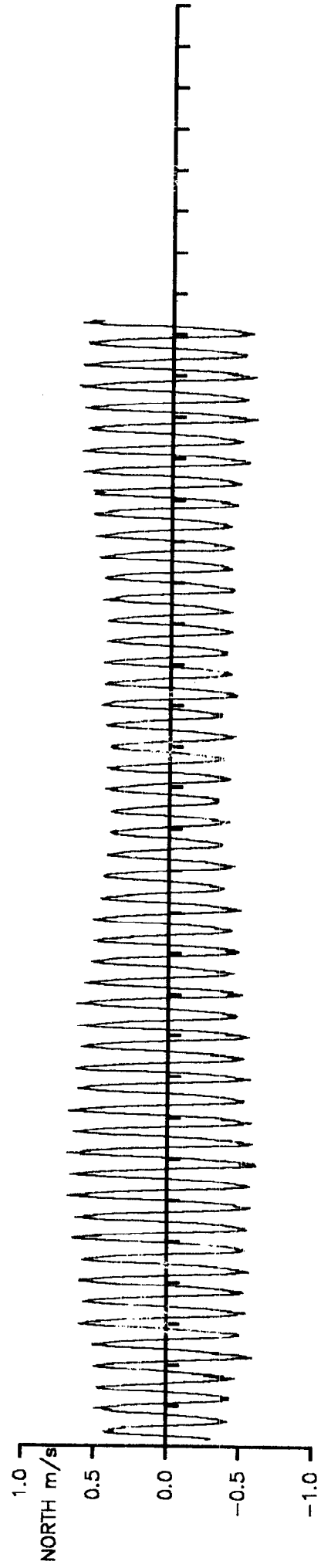
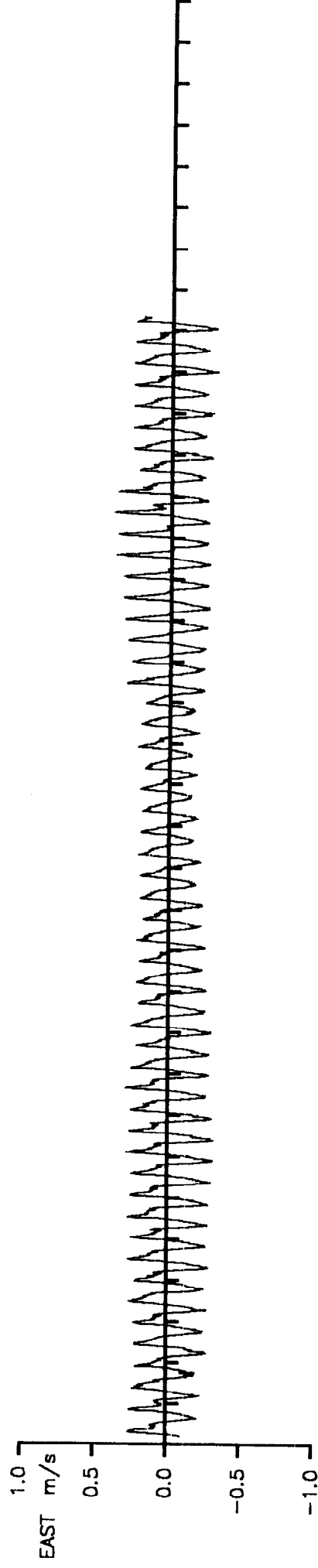
Maximum variance 0.1209E-03	Direction	56.6
Minimum variance 0.5332E-04	Direction	146.6
Total variance 0.1742E-03	Ratio of variances	0.4410E+00
Average direction. maxdir -PI/2 to maxdir +PI/2		41.0
Average direction. maxdir +PI/2 to maxdir -PI/2		149.8

Meter information details for 9347

Rig No	:	C53FC
Meter No	:	9347
Recording interval	:	600.0 seconds
Meter height from bottom	:	7.0 m
Position of meter on rig	:	B
Meter type	:	AS
Meter started	:	28-MAY-89 11:00:00
Meter stopped	:	25-JUNE-89 13:00:00
Period switched on	:	28.1 days
Period of good data	:	27.1 days
Total number of scans	:	3906
Timing error	:	None
Comments	:	Good record obtained

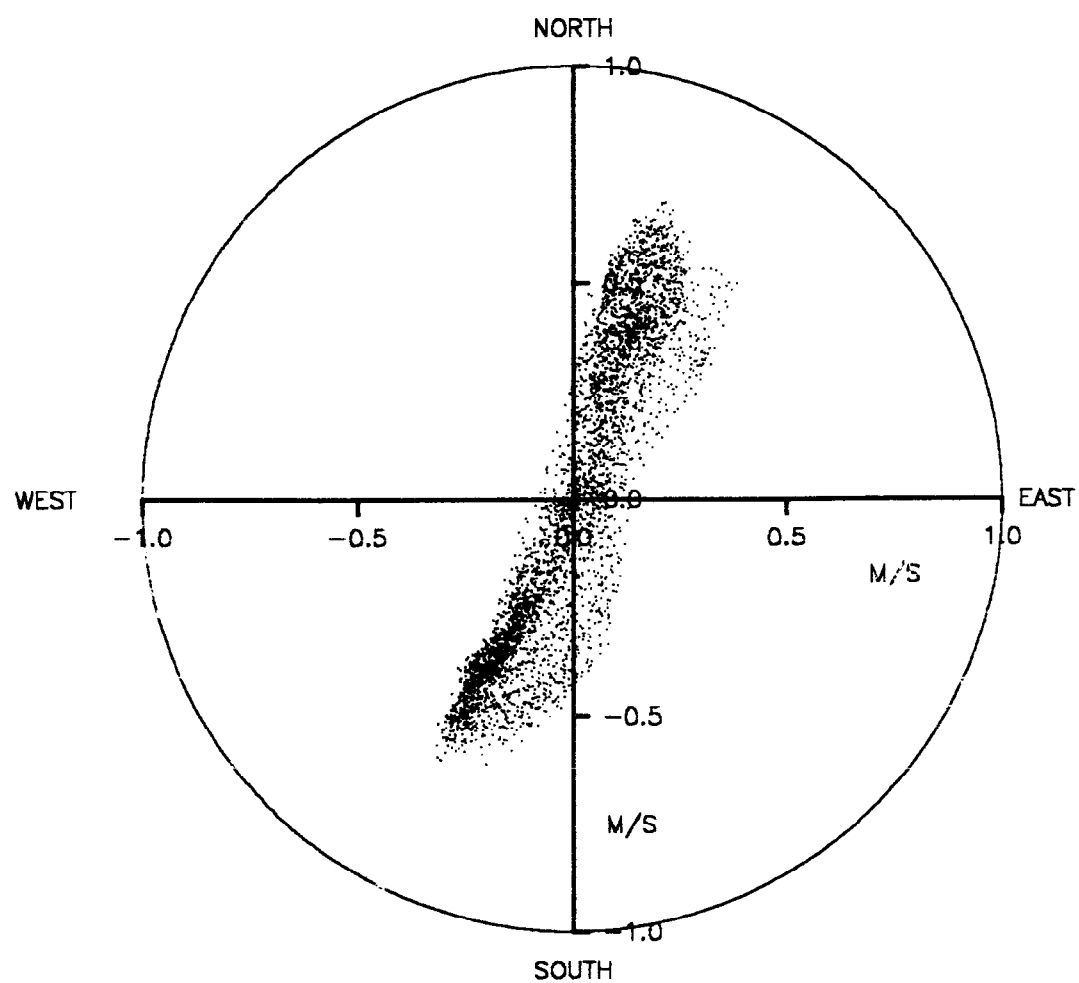
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 9347 Rig no. C53FC Depth of water(m) 30.0
Start/End 1989/05/29 AT 05:08:00 1989/06/25 AT 08:10:00
Position 52 36.94N 03 46.14E Meter Height(m) 7.0



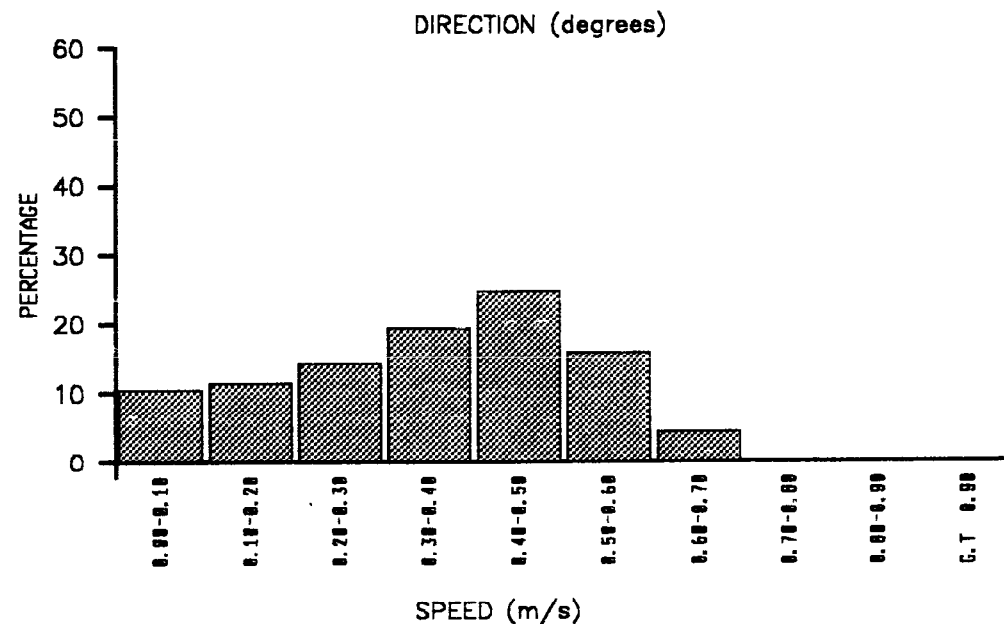
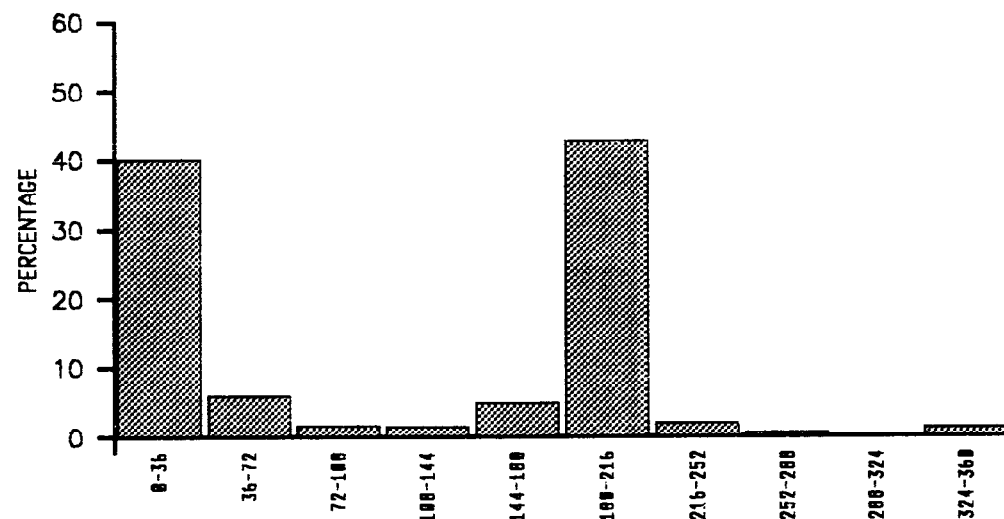
SCATTER PLOT

Meter no. 9347 Rig no. C53FC Depth of water(m) 30.0
 Start/End 1989/05/29 AT 05:08:00 1989/06/25 AT 08:10:00
 Position 52 36.94N 03 46.14E Meter Height(m) 7.0



HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 9347 Rig no. C53FC Depth of water(m) 30.0
 Start/End 1989/05/29 AT 05:08:00 1989/06/25 AT 08:10:00
 Position 52 36.94N 03 46.14E Meter Height(m) 7.0

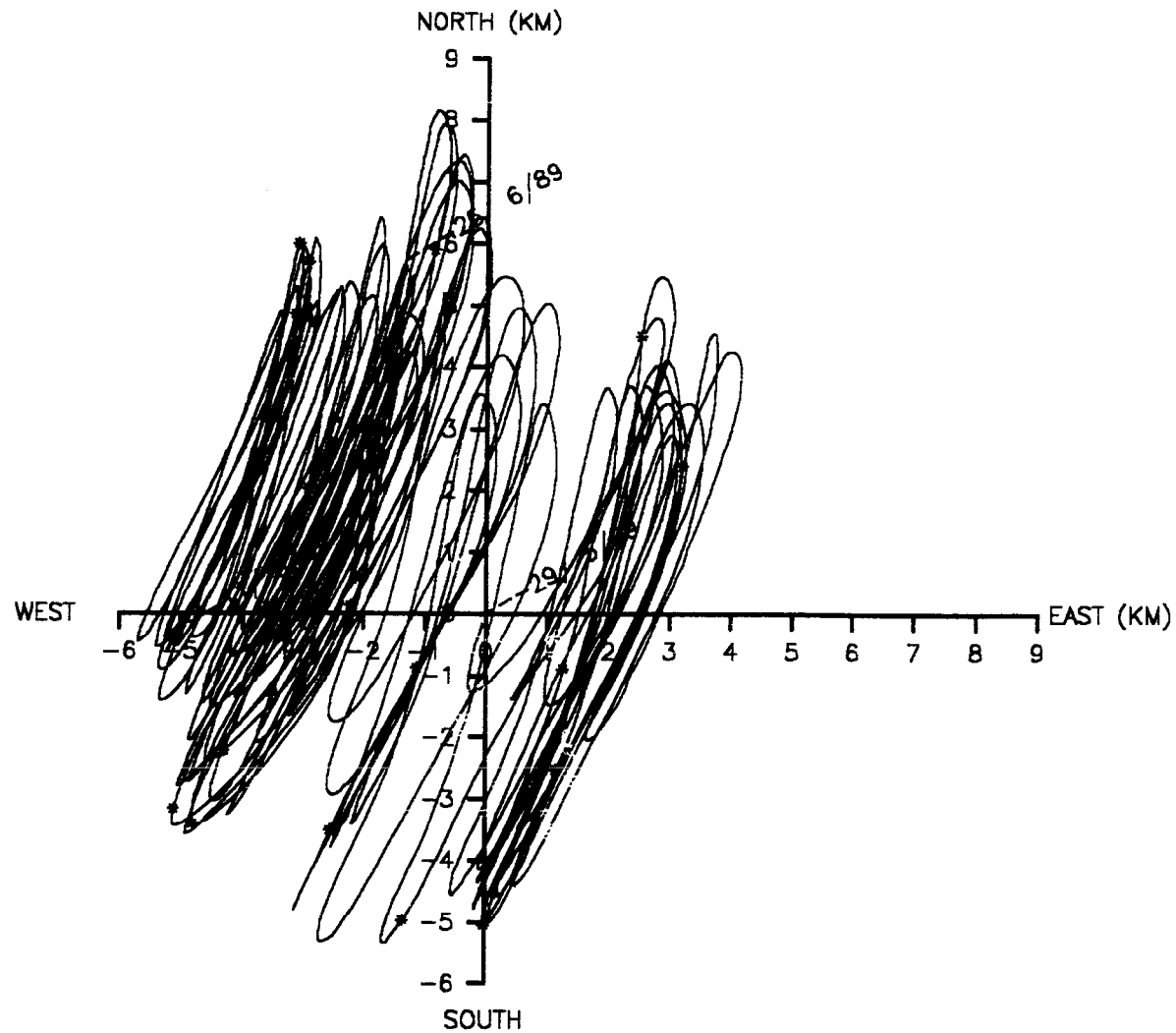


VECTOR PLOT

Meter no. 9347 Rig no. C53FC Depth of water(m) 30.0

Start/End 1989/05/29 AT 05:08:00 1989/06/25 AT 08:10:00

Position 52 36.94N 03 46.14E Meter Height(m) 7.0

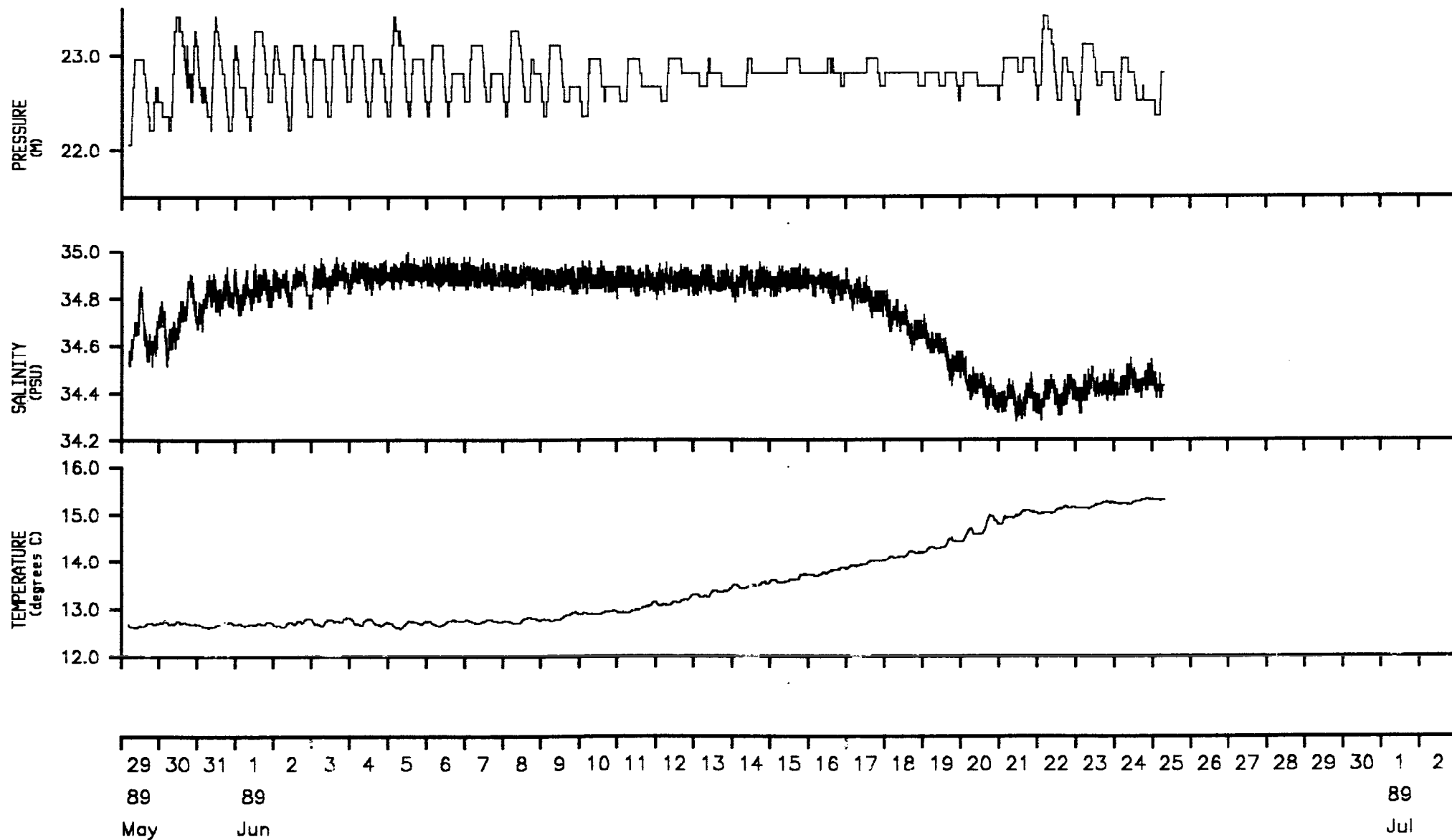


TEMPERATURE, SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9347 Rig no. C53FC Depth of water(m) 30.0

Start/End 1989/05/29 AT 05:08:00 1989/06/25 AT 08:10:00

Position 52 36.94N 03 46.14E Meter Height(m) 7.0



STATISTICS FOR AS9347B C53FCS A

	Mean	Variance	Standard deviation
Eastings	-0.0006	0.22531301E-01	0.15010428E+00
Northings	0.0024	0.12872809E+00	0.35878706E+00
Speed	0.3517	0.27561545E-01	0.16601664E+00

Vector mean speed 0.0025
 Vector Mean Direction -13.2

Maximum ten values									
Eastings					Northings				
0.385	0.372	0.365	0.361	0.360	0.686	0.685	0.683	0.681	0.665
0.358	0.353	0.348	0.343	0.342	0.665	0.661	0.656	0.649	0.644

Minimum ten values									
Eastings					Northings				
-0.301	-0.303	-0.305	-0.305	-0.306	-0.574	-0.581	-0.581	-0.583	-0.585
-0.310	-0.313	-0.315	-0.315	-0.318	-0.591	-0.595	-0.601	-0.603	-0.612

Maximum speeds									
0.720	0.717	0.714	0.711	0.706	0.694	0.694	0.694	0.679	0.676
0.676	0.676	0.674	0.671	0.671	0.671	0.671	0.668	0.665	0.665
0.665	0.659	0.659	0.659	0.659	0.659	0.659	0.656	0.656	0.656
0.653	0.653	0.653	0.653	0.650	0.650	0.650	0.650	0.650	0.650
0.650	0.650	0.650	0.647	0.647	0.647	0.647	0.647	0.645	0.645
0.645	0.642	0.642	0.642	0.642	0.642	0.639	0.639	0.639	0.639
0.639	0.636	0.636	0.636	0.636	0.636	0.633	0.633	0.633	0.633
0.633	0.630	0.630	0.630	0.630	0.630	0.630	0.630	0.630	0.630
0.630	0.627	0.627	0.627	0.627	0.624	0.624	0.624	0.624	0.624
0.624	0.624	0.624	0.624	0.624	0.624	0.621	0.621	0.621	0.621

Variance ellipse statistics

Maximum variance 0.1476E+00	Direction	21.2
Minimum variance 0.3670E-02	Direction	111.2
Total variance 0.1513E+00	Ratio of variances	0.2487E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		2.4
Average direction. maxdir +PI/2 to maxdir -PI/2		177.5

STATISTICS FOR AS9347B C53FCSF A

	Mean	Variance	Standard deviation
Eastings	-0.0016	0.12096137E-03	0.10998249E-01
Northings	0.0018	0.81956983E-04	0.90530068E-02
Speed	0.0119	0.64223728E-04	0.80139711E-02

Vector mean speed 0.0023
Vector Mean Direction -41.6

Maximum ten values Eastings Northings

0.028	0.026	0.021	0.017	0.015	0.021	0.021	0.019	0.019	0.018
0.015	0.015	0.014	0.013	0.013	0.017	0.017	0.016	0.016	0.016

Minimum ten values Eastings Northings

-0.015	-0.016	-0.019	-0.021	-0.023	-0.009	-0.011	-0.012	-0.013	-0.013
-0.023	-0.026	-0.027	-0.028	-0.029	-0.013	-0.014	-0.014	-0.014	-0.015

Maximum speeds

0.033	0.033	0.029	0.028	0.028	0.027	0.027	0.025	0.025	0.024
0.024	0.021	0.021	0.021	0.019	0.018	0.018	0.017	0.017	0.016
0.016	0.016	0.015	0.015	0.015	0.015	0.015	0.015	0.014	0.014
0.014	0.014	0.014	0.013	0.013	0.013	0.013	0.013	0.012	0.012
0.011	0.011	0.011	0.011	0.010	0.010	0.009	0.009	0.009	0.008
0.008	0.008	0.008	0.007	0.007	0.007	0.007	0.007	0.006	0.006
0.006	0.005	0.005	0.005	0.005	0.005	0.005	0.004	0.004	0.004
0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.003	0.003	0.002
0.002	0.002	0.002	0.001	0.001					

Variance ellipse statistics

Maximum variance 0.1521E-03	Direction	56.3
Minimum variance 0.5080E-04	Direction	146.3
Total variance 0.2029E-03	Ratio of variances	0.3339E+00
Average direction. maxdir -PI/2 to maxdir +PI/2		-23.1
Average direction. maxdir +PI/2 to maxdir -PI/2		185.4

STICK TIME SERIES PLOT

Rig no. C53FC Depth of water(m) 30.0

Start/End 1989/05/29 AT 05:08:00 1989/06/25 AT 08:10:00

Position 52 36.94N 03 46.14E

Filtered Series Scale 0.1 m/s

Meter No. Meter Height

9347 7.0 M

1119 12.0 M



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5

Rig information details for C55FC

Position Latitude	:	52 36.88N
Position Longitude	:	03 45.95E
Water depth	:	30.0 m
Deployed on cruise	:	C55
Recovered on cruise	:	C57
Site name identification	:	F
Magnetic deviation	:	3.1 degrees west
Rig deployed on	:	25-JUNE-89 09:05:00
Rig recovered on	:	25-JULY-89 10:26:00
Period of deployment	:	30.1 days
Comments	:	Launch and recovery successful

Meter information details for 1265

Rig No	:	C55FC
Meter No	:	1265
Recording interval	:	600.0 seconds
Meter height from bottom	:	12.0 m
Position of meter on rig	:	T
Meter type	:	S4
Meter started	:	24-JUNE-89 22:00:00
Meter stopped	:	25-JULY-89 12:52:00
Period switched on	:	30.6 days
Period of good data	:	0.0 days
Total number of scans	:	4328
Timing error	:	120 seconds slow
Comments	:	Data corrupted

Hourly time stamp has jumped by one minute at:

(1) 08-JULY-89 10:00 to 11:01

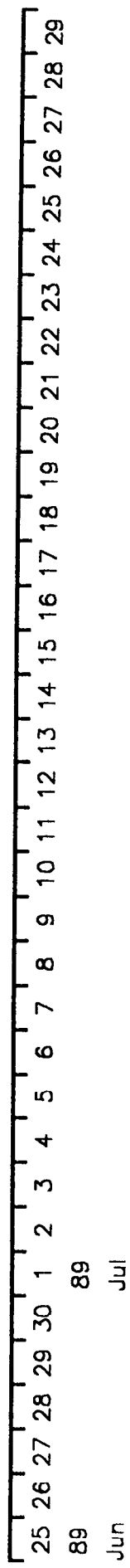
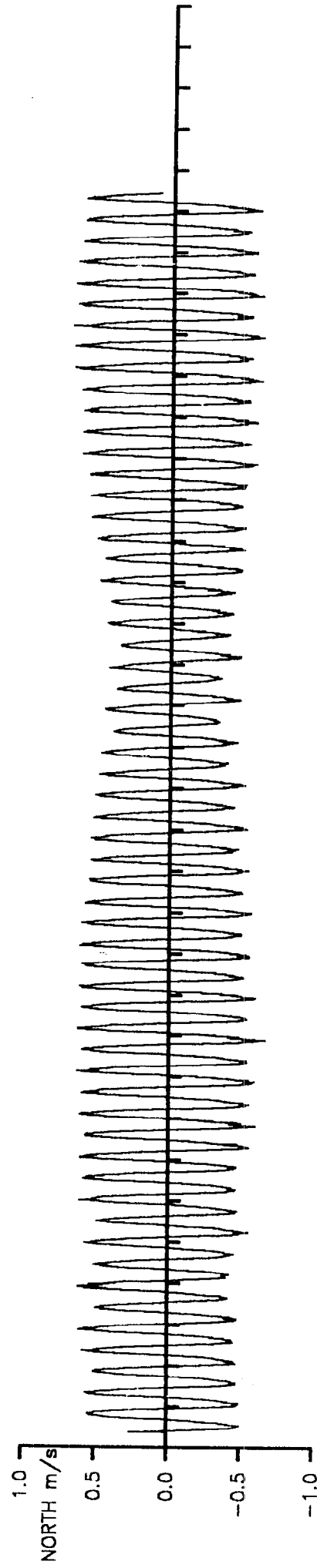
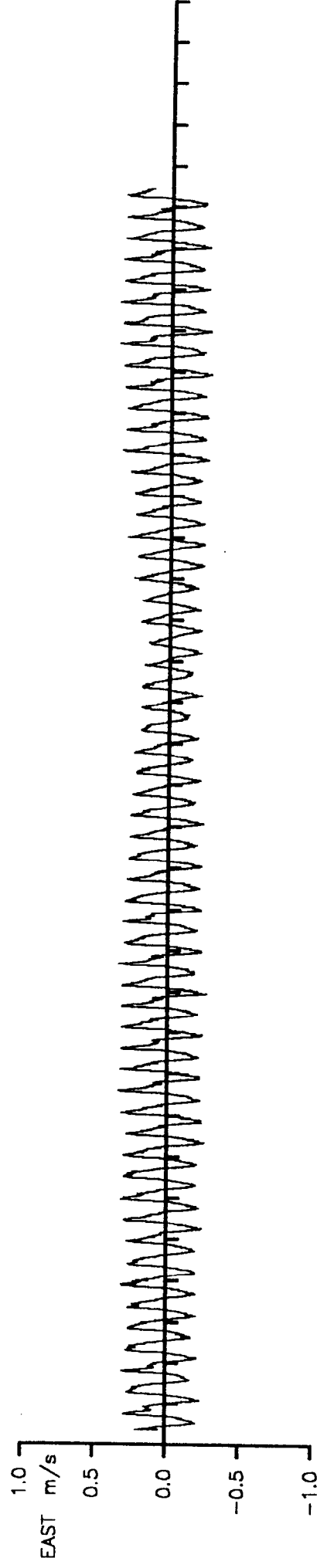
(2) 22-JULY-89 21:01 to 22:00

Meter information details for 9352

Rig No	:	C55FC
Meter No	:	9352
Recording interval	:	600.0 seconds
Meter height from bottom	:	7.0 m
Position of meter on rig	:	B
Meter type	:	AS
Meter started	:	24-JUNE-89 22:10:00
Meter stopped	:	25-JULY-89 15:00:00
Period switched on	:	30.7 days
Period of good data	:	30.1 days
Total number of scans	:	4328
Timing error	:	None
Comments	:	Good record obtained

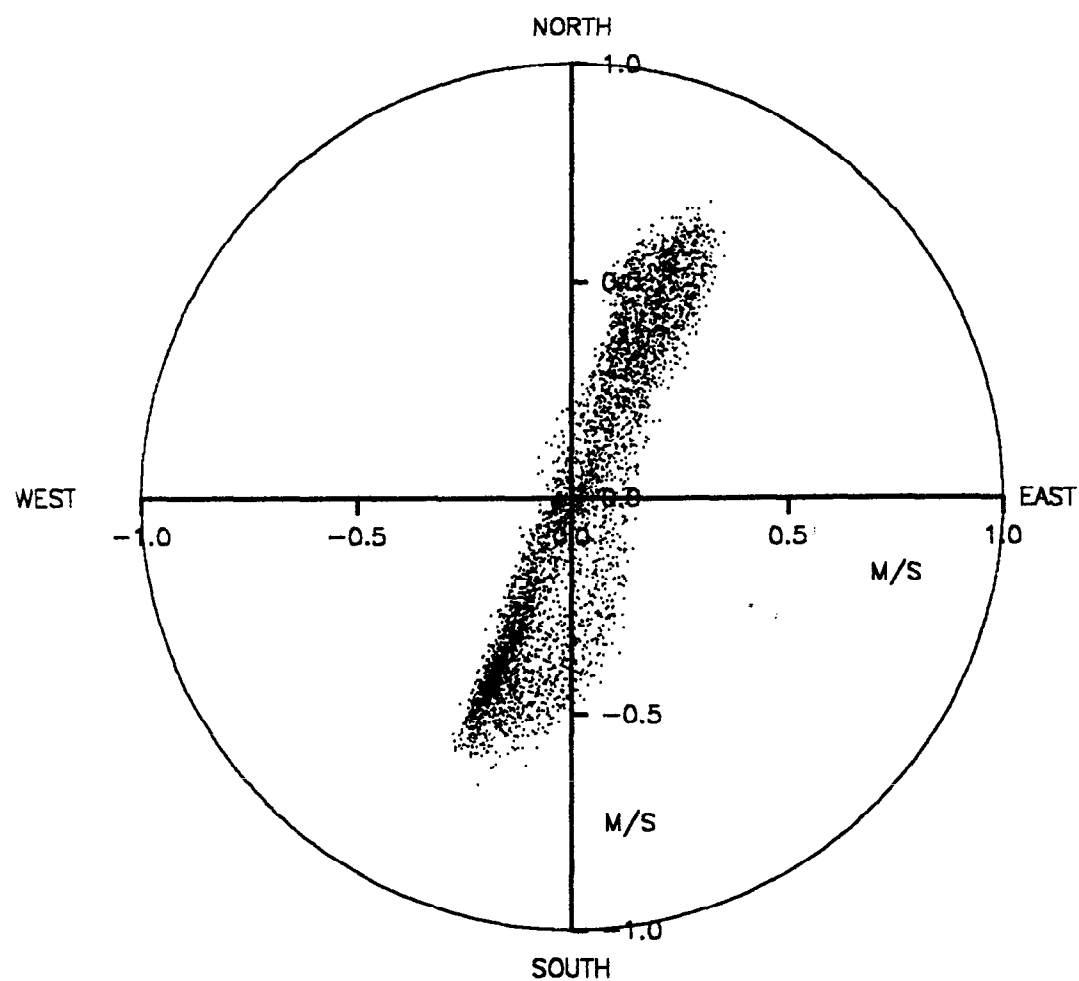
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 9352 Rig no. C55FC Depth of water(m) 30.0
Start/End 1989/06/25 AT 09:05:00 1989/07/25 AT 10:26:00
Position 52 36.88N 03 45.95E Meter Height(m) 7.0



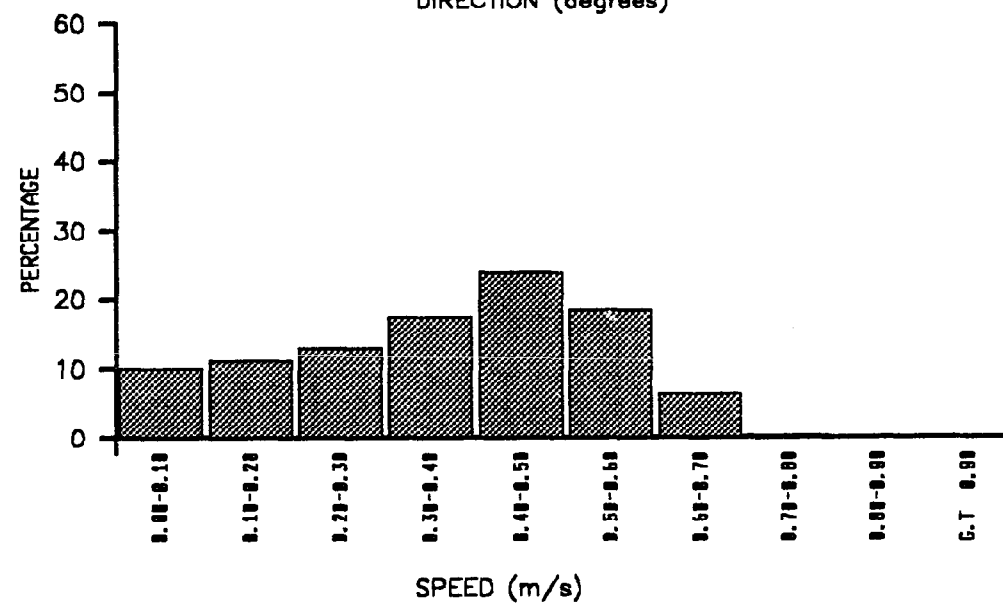
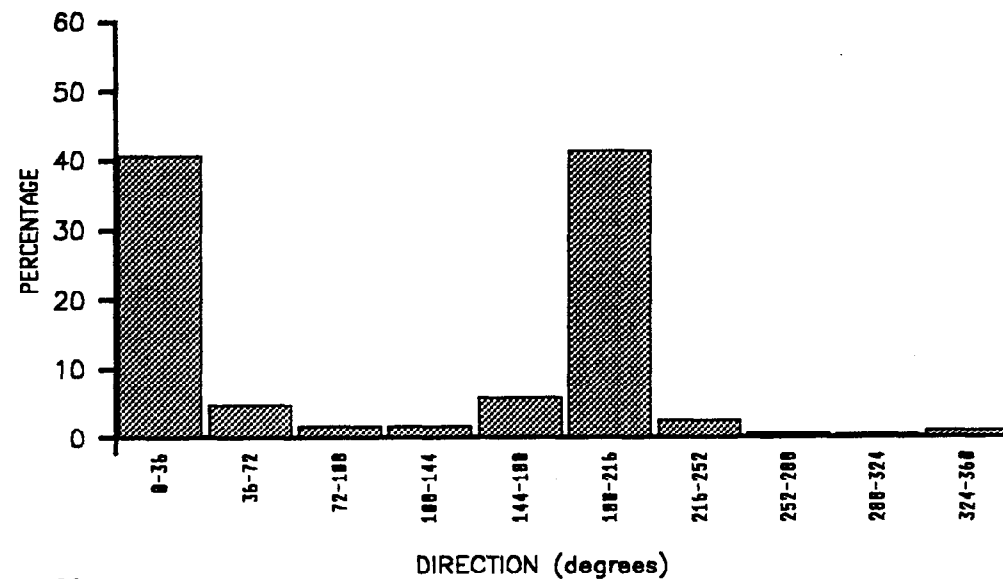
SCATTER PLOT

Meter no. 9352 Rig no. C55FC Depth of water(m) 30.0
 Start/End 1989/06/25 AT 09:05:00 1989/07/25 AT 10:26:00
 Position 52 36.88N 03 45.95E Meter Height(m) 7.0



HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 9352 Rig no. C55FC Depth of water(m) 30.0
 Start/End 1989/06/25 AT 09:05:00 1989/07/25 AT 10:26:00
 Position 52 36.88N 03 45.95E Meter Height(m) 7.0

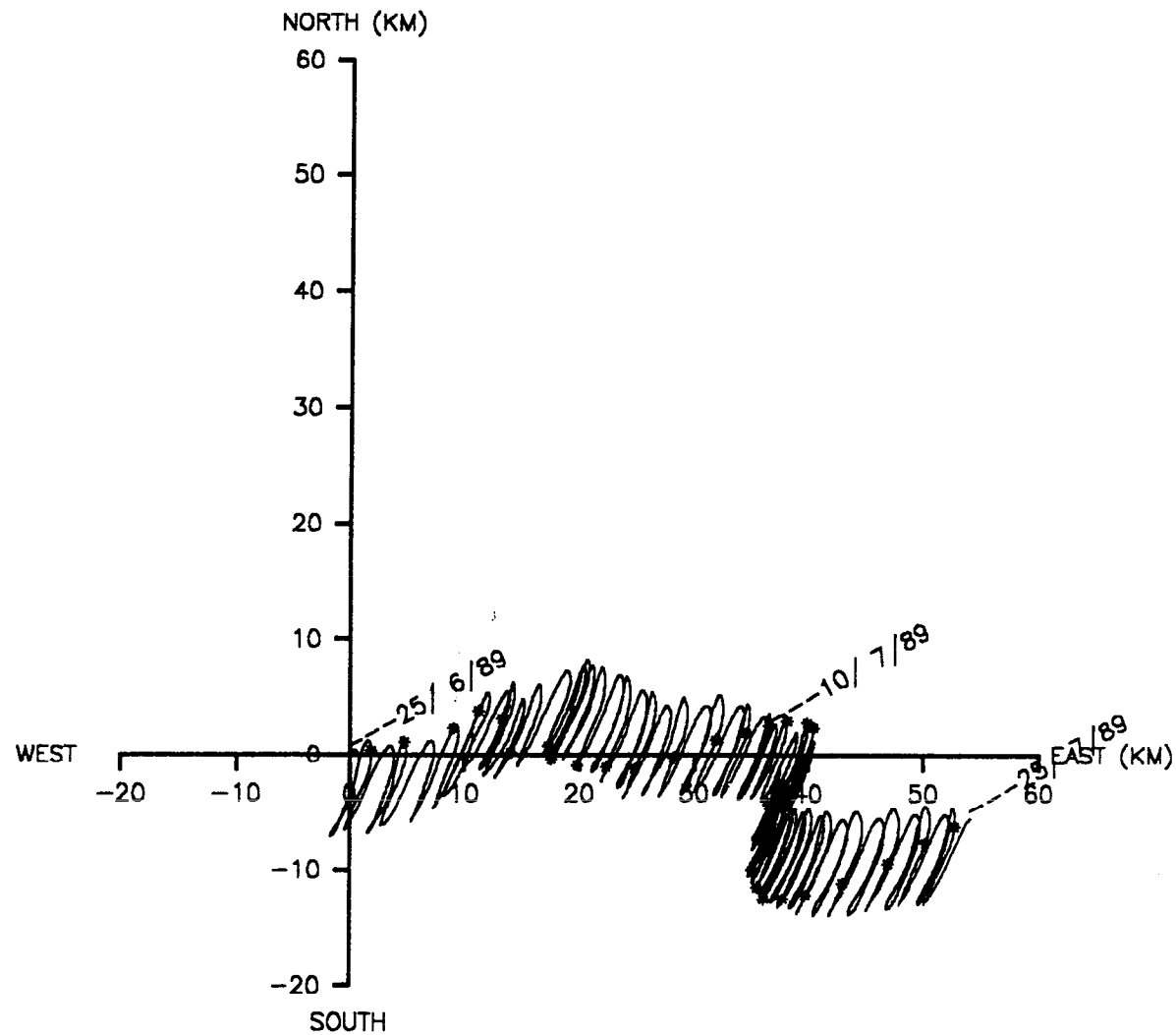


VECTOR PLOT

Meter no. 9352 Rig no. C55FC Depth of water(m) 30.0

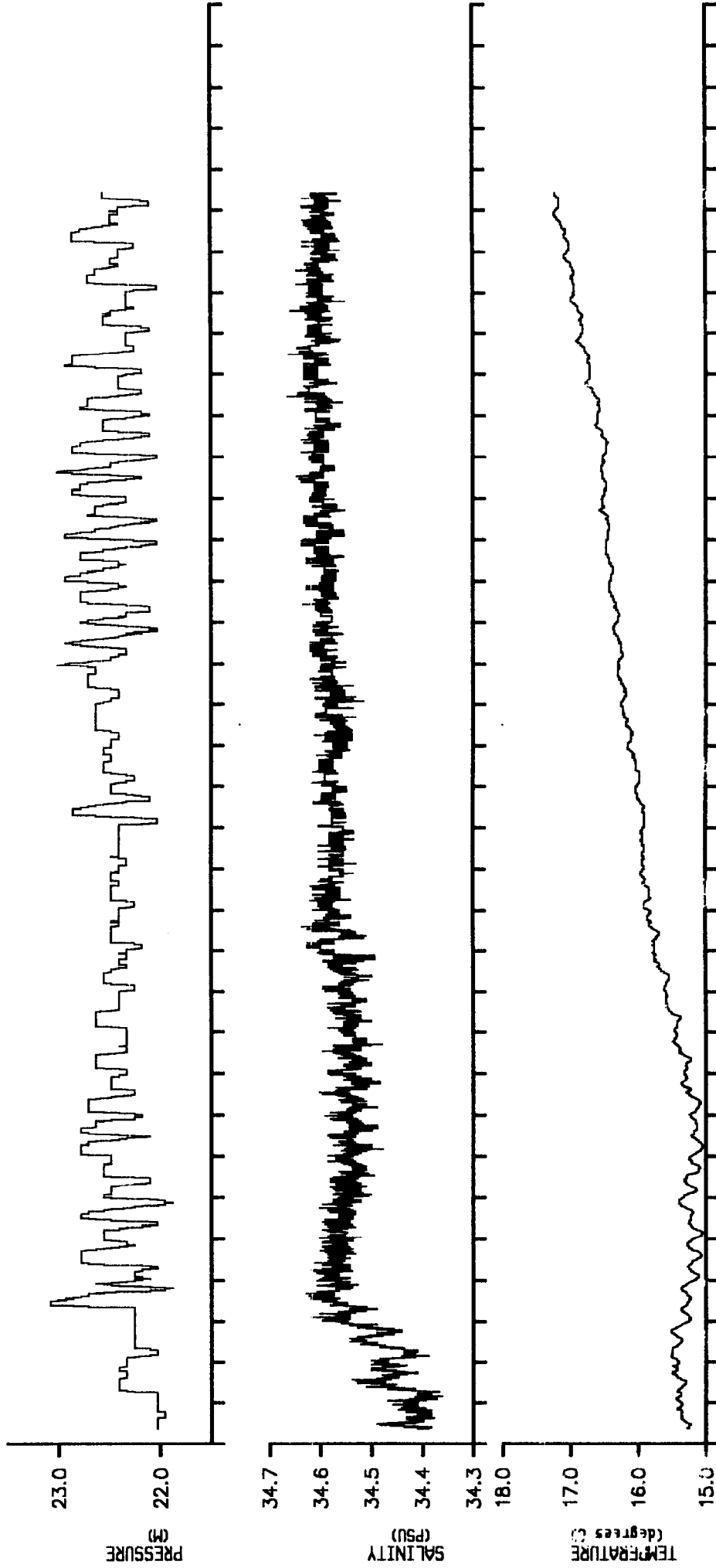
Start/End 1989/06/25 AT 09:05:00 1989/07/25 AT 10:26:00

Position 52 36.88N 03 45.95E Meter Height(m) 7.0



TEMPERATURE, SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9352 Rig no. C55FC Depth of water(m) 30.0
Start/End 1989/06/25 AT 09:05:00 1989/07/25 AT 10:26:00
Position 52 36.88N 03 45.95E Meter Height(m) 7.0



25 26 27 28 29 30 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
89
Jun Jul

STATISTICS FOR AS9352B C55FCS A

	Mean	Variance	Standard deviation
Eastings	0.0209	0.23946770E-01	0.15474743E+00
Northings	-0.0021	0.13842028E+00	0.37204880E+00
Speed	0.3648	0.29707544E-01	0.17235869E+00

Vector mean speed 0.0210
Vector Mean Direction 95.8

Maximum ten values									
Eastings					Northings				
0.352	0.350	0.339	0.331	0.331	0.684	0.670	0.668	0.667	0.655
0.330	0.330	0.328	0.327	0.326	0.648	0.647	0.647	0.646	0.646

Minimum ten values									
Eastings					Northings				
-0.257	-0.258	-0.259	-0.260	-0.262	-0.591	-0.594	-0.598	-0.599	-0.599
-0.263	-0.271	-0.272	-0.273	-0.277	-0.617	-0.621	-0.624	-0.626	-0.665

Maximum speeds									
0.755	0.729	0.726	0.720	0.717	0.708	0.706	0.706	0.706	0.703
0.703	0.700	0.700	0.697	0.697	0.697	0.697	0.694	0.691	0.691
0.691	0.688	0.688	0.688	0.685	0.685	0.682	0.682	0.682	0.682
0.679	0.679	0.679	0.679	0.679	0.679	0.679	0.676	0.676	0.676
0.676	0.676	0.676	0.674	0.674	0.674	0.671	0.671	0.671	0.671
0.671	0.668	0.668	0.668	0.668	0.665	0.665	0.665	0.665	0.665
0.665	0.659	0.659	0.659	0.659	0.659	0.659	0.659	0.656	0.656
0.656	0.656	0.656	0.656	0.656	0.656	0.653	0.653	0.653	0.653
0.653	0.650	0.650	0.650	0.647	0.647	0.647	0.647	0.647	0.645
0.645	0.645	0.645	0.645	0.642	0.642	0.642	0.642	0.642	0.642

Variance ellipse statistics

Maximum variance 0.1594E+00	Direction	21.5
Minimum variance 0.2996E-02	Direction	111.5
Total variance 0.1624E+00	Ratio of variances	0.1880E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		5.0
Average direction. maxdir +PI/2 to maxdir -PI/2		175.1

STATISTICS FOR AS9352B C55FCSF A

	Mean	Variance	Standard deviation
Eastings	0.0174	0.26898296E-03	0.16400699E-01
Northings	-0.0039	0.18609942E-03	0.13641823E-01
Speed	0.0249	0.14967688E-03	0.12234248E-01

Vector mean speed 0.0179
Vector Mean Direction 102.6

Maximum ten values | Eastings | Northings | |----------|-----------| |----------|-----------|

0.053	0.051	0.045	0.039	0.039	0.044	0.039	0.038	0.031	0.027
0.038	0.037	0.037	0.036	0.036	0.027	0.025	0.025	0.016	0.012

Minimum ten values | Eastings | Northings | |----------|-----------| |----------|-----------|

-0.003	-0.003	-0.004	-0.007	-0.014	-0.017	-0.018	-0.019	-0.023	-0.023
-0.015	-0.023	-0.026	-0.031	-0.032	-0.024	-0.026	-0.026	-0.029	-0.030

Maximum speeds

0.061	0.057	0.054	0.052	0.052	0.048	0.043	0.043	0.042	0.041
0.041	0.039	0.038	0.038	0.037	0.037	0.036	0.036	0.035	0.035
0.034	0.034	0.033	0.032	0.031	0.031	0.031	0.031	0.030	0.029
0.029	0.029	0.028	0.028	0.028	0.028	0.028	0.028	0.027	0.027
0.027	0.027	0.026	0.026	0.025	0.025	0.024	0.024	0.024	0.023
0.023	0.023	0.022	0.022	0.022	0.022	0.021	0.021	0.021	0.020
0.019	0.019	0.019	0.019	0.019	0.019	0.018	0.018	0.017	0.017
0.017	0.017	0.015	0.015	0.015	0.015	0.014	0.014	0.013	0.013
0.013	0.013	0.012	0.012	0.011	0.011	0.011	0.011	0.010	0.009
0.009	0.007	0.007	0.006	0.006	0.005	0.004			

Variance ellipse statistics

Maximum variance 0.3841E-03	Direction	52.7
Minimum variance 0.7100E-04	Direction	142.7
Total variance 0.4551E-03	Ratio of variances	0.1849E+00
Average direction. maxdir -PI/2 to maxdir +PI/2		46.4
Average direction. maxdir +PI/2 to maxdir -PI/2		137.5

STICK TIME SERIES PLOT

Rig no. C55FC Depth of water(m) 30.0

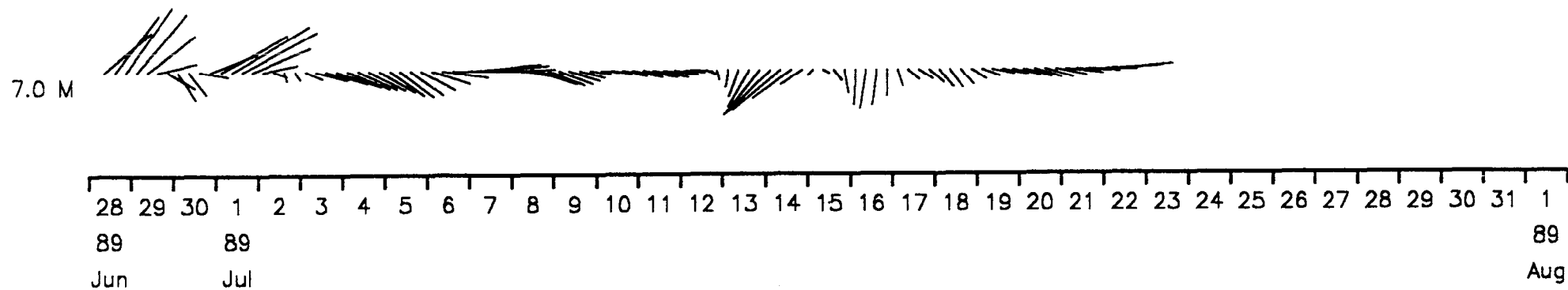
Start/End 1989/06/25 AT 09:05:00 1989/07/25 AT 10:26:00

Position 52 36.88N 03 45.95E

Filtered Series Scale 0.1 m/s

Meter No. Meter Height

9352 7.0 M



Rig information details for C57FC

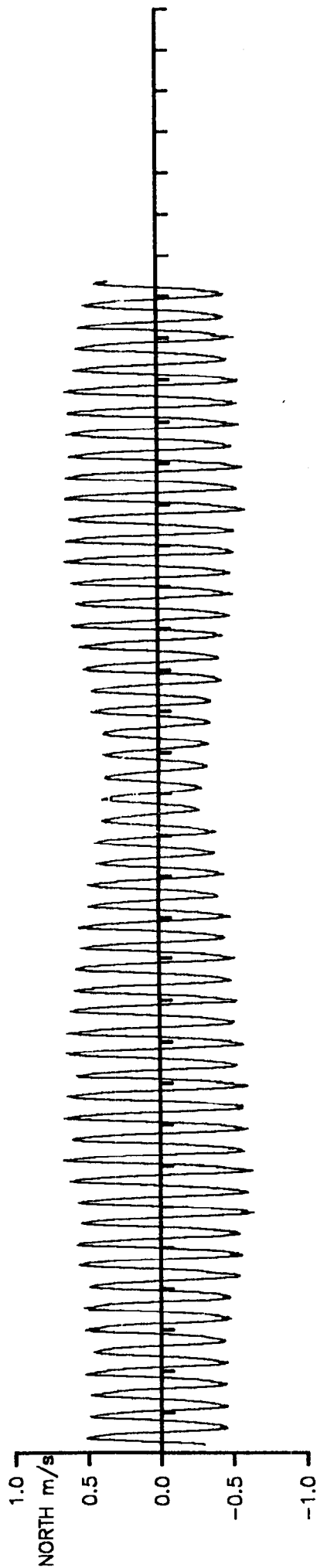
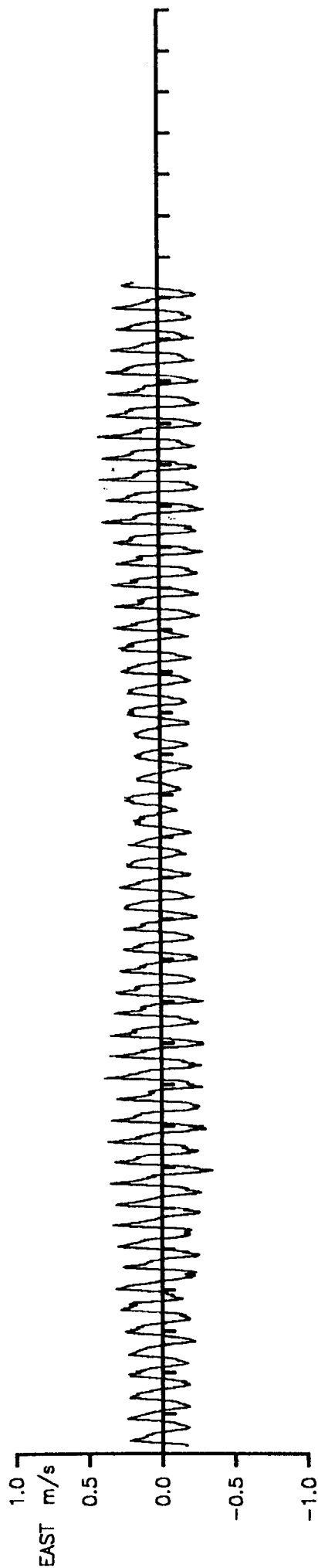
Position Latitude	:	52 37.00N
Position Longitude	:	03 45.95E
Water depth	:	30.0 m
Deployed on cruise	:	C57
Recovered on cruise	:	C59
Site name identification	:	F
Magnetic deviation	:	3.1 degrees west
Rig deployed on	:	27-JULY-89 05:09:00
Rig recovered on	:	24-AUG-89 09:10:00
Period of deployment	:	28.2 days
Comments	:	Launch and recovery successful

Meter information details for 1261

Rig No	:	C57FC
Meter No	:	1261
Recording interval	:	600.0 seconds
Meter height from bottom	:	12.0 m
Position of meter on rig	:	T
Meter type	:	S4
Meter started	:	26-JULY-89 23:00:00
Meter stopped	:	24-AUG-89 09:31:00
Period switched on	:	28.4 days
Period of good data	:	28.2 days
Total number of scans	:	4056
Timing error	:	60 seconds slow
Comments	:	Hourly time stamp has jumped by one minute at: (1) 11-AUG-89 22:00 to 23:01

VELOCITY COMPONENT TIME SERIES PLOT

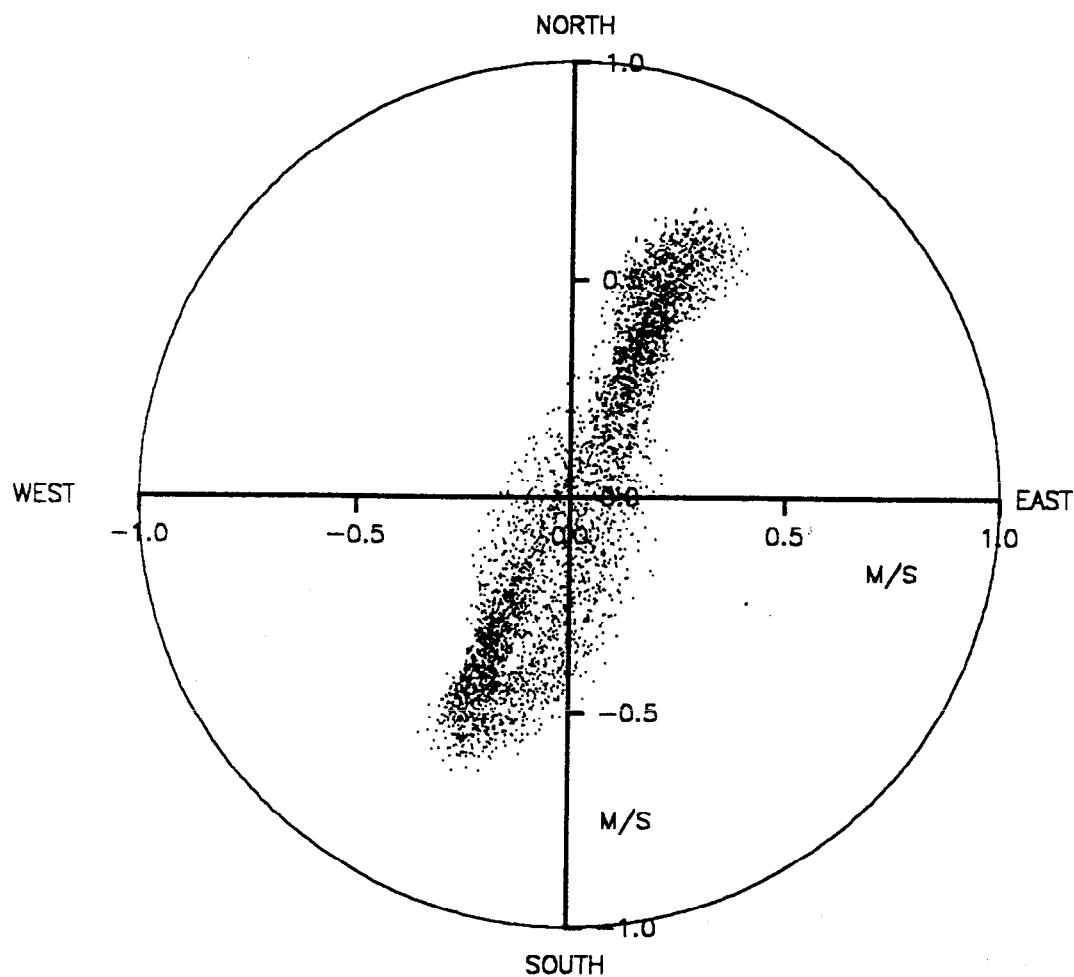
Meter no. 1261 Rig no. C57FC Depth of water(m) 30.0
Start/End 1989/07/27 AT 05:09:00 1989/08/24 AT 09:10:00
Position 52 37.00N 03 45.95E Meter Height(m) 12.0



27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
89 89
Jul Aug

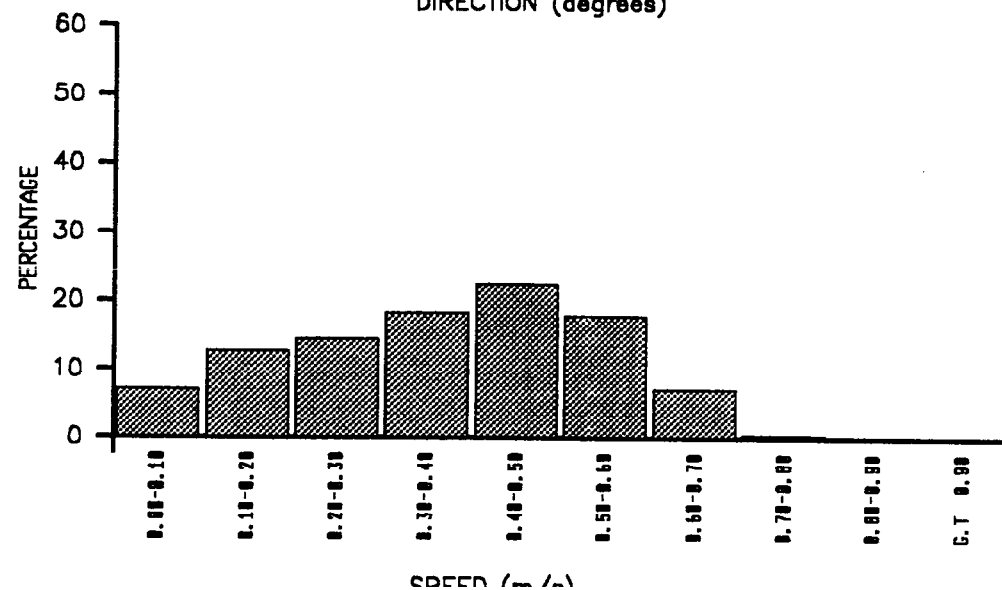
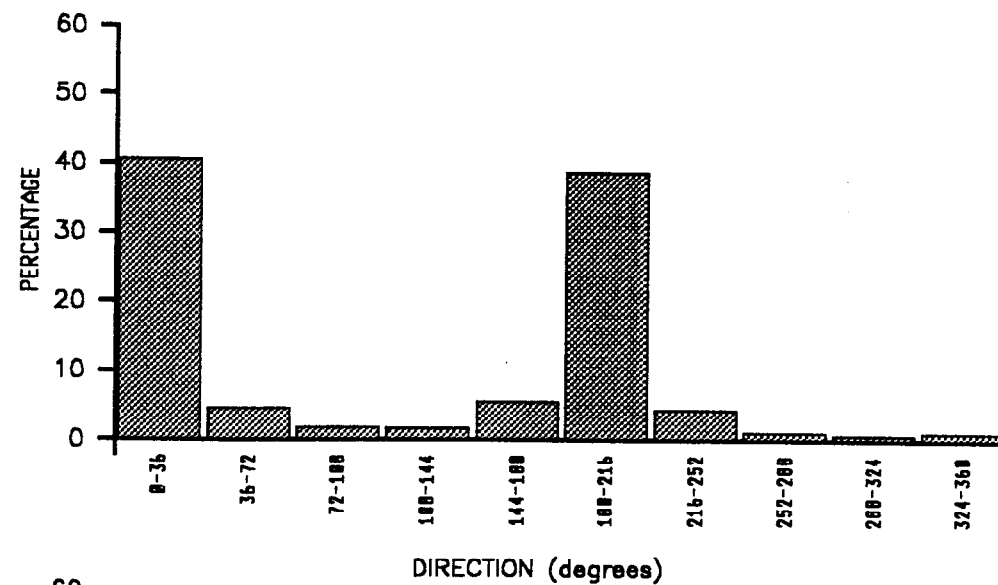
SCATTER PLOT

Meter no. 1261 Rig no. C57FC Depth of water(m) 30.0
 Start/End 1989/07/27 AT 05:09:00 1989/08/24 AT 09:10:00
 Position 52 37.00N 03 45.95E Meter Height(m) 12.0



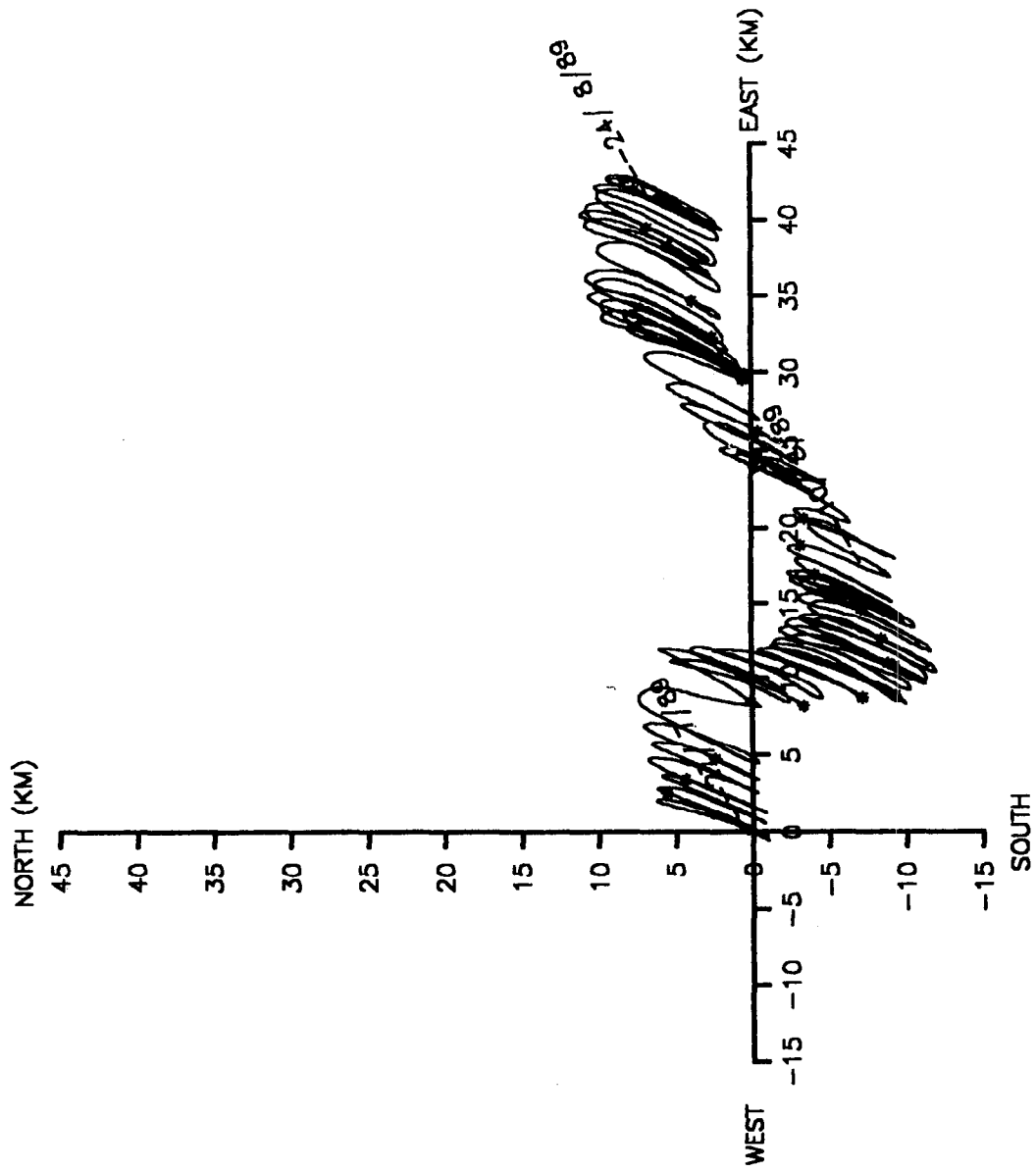
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1261 Rig no. C57FC Depth of water(m) 30.0
 Start/End 1989/07/27 AT 05:09:00 1989/08/24 AT 09:10:00
 Position 52 37.00N 03 45.95E Meter Height(m) 12.0



VECTOR PLOT

Meter no. 1261 Rig no. C57FC Depth of water(m) 30.0
Start/End 1989/07/27 AT 05:09:00 1989/08/24 AT 09:10:00
Position 52 37.00N 03 45.95E Meter Height(m) 12.0



STATISTICS FOR S41261T C57FCS A

	Mean	Variance	Standard deviation
Eastings	0.0171	0.28953854E-01	0.17015839E+00
Northings	0.0025	0.13588411E+00	0.36862457E+00
Speed	0.3701	0.28106492E-01	0.16764981E+00

Vector mean speed 0.0173
 Vector Mean Direction 81.6

Maximum ten values									
Eastings					Northings				
0.406	0.405	0.398	0.393	0.392	0.662	0.662	0.656	0.654	0.642
0.390	0.386	0.382	0.379	0.375	0.637	0.636	0.636	0.634	0.634

Minimum ten values									
Eastings					Northings				
-0.300	-0.301	-0.302	-0.307	-0.312	-0.599	-0.600	-0.600	-0.601	-0.602
-0.317	-0.323	-0.324	-0.327	-0.349	-0.606	-0.611	-0.628	-0.634	-0.636

Maximum speeds									
0.736	0.729	0.725	0.721	0.720	0.715	0.714	0.712	0.711	0.707
0.704	0.703	0.703	0.702	0.700	0.699	0.696	0.695	0.695	0.693
0.693	0.692	0.691	0.691	0.690	0.689	0.688	0.688	0.688	0.688
0.687	0.687	0.687	0.685	0.685	0.685	0.684	0.679	0.679	0.678
0.678	0.678	0.677	0.677	0.677	0.676	0.674	0.673	0.673	0.673
0.673	0.673	0.672	0.672	0.671	0.671	0.670	0.670	0.669	0.669
0.668	0.667	0.666	0.666	0.665	0.665	0.665	0.665	0.664	0.664
0.664	0.664	0.663	0.663	0.662	0.662	0.662	0.661	0.661	0.661
0.660	0.660	0.659	0.659	0.659	0.658	0.658	0.658	0.658	0.658
0.657	0.656	0.656	0.656	0.655	0.655	0.655	0.655	0.654	0.654

Variance ellipse statistics

Maximum variance 0.1610E+00	Direction	23.6
Minimum variance 0.3806E-02	Direction	113.6
Total variance 0.1648E+00	Ratio of variances	0.2363E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		3.9
Average direction. maxdir +PI/2 to maxdir -PI/2		176.5

STATISTICS FOR S41261T C57FCSF A

	Mean	Variance	Standard deviation
Eastings	0.0175	0.24089155E-03	0.15520677E-01
Northings	0.0017	0.37298282E-03	0.19312762E-01
Speed	0.0258	0.25385362E-03	0.15932787E-01

Vector mean speed 0.0176
 Vector Mean Direction 84.5

Maximum ten values					Northings				
Eastings									
0.058	0.055	0.052	0.048	0.047	0.046	0.043	0.040	0.034	0.028
0.046	0.045	0.043	0.042	0.040	0.027	0.027	0.026	0.022	0.022

Minimum ten values					Northings				
Eastings									
0.001	0.000	-0.002	-0.002	-0.003	-0.023	-0.024	-0.027	-0.029	-0.030
-0.003	-0.005	-0.005	-0.006	-0.009	-0.033	-0.044	-0.050	-0.056	-0.059

Maximum speeds									
0.069	0.064	0.059	0.059	0.058	0.056	0.055	0.054	0.053	0.050
0.050	0.049	0.046	0.044	0.042	0.041	0.040	0.040	0.040	0.038
0.038	0.036	0.036	0.035	0.034	0.034	0.033	0.033	0.033	0.031
0.030	0.030	0.030	0.028	0.026	0.024	0.024	0.023	0.023	0.023
0.022	0.021	0.020	0.020	0.019	0.019	0.019	0.019	0.019	0.018
0.018	0.018	0.018	0.017	0.017	0.016	0.016	0.016	0.016	0.015
0.015	0.015	0.015	0.015	0.014	0.014	0.013	0.013	0.013	0.013
0.013	0.013	0.012	0.012	0.011	0.011	0.011	0.011	0.010	0.010
0.010	0.009	0.009	0.009	0.008	0.006	0.006	0.005	0.004	

Variance ellipse statistics

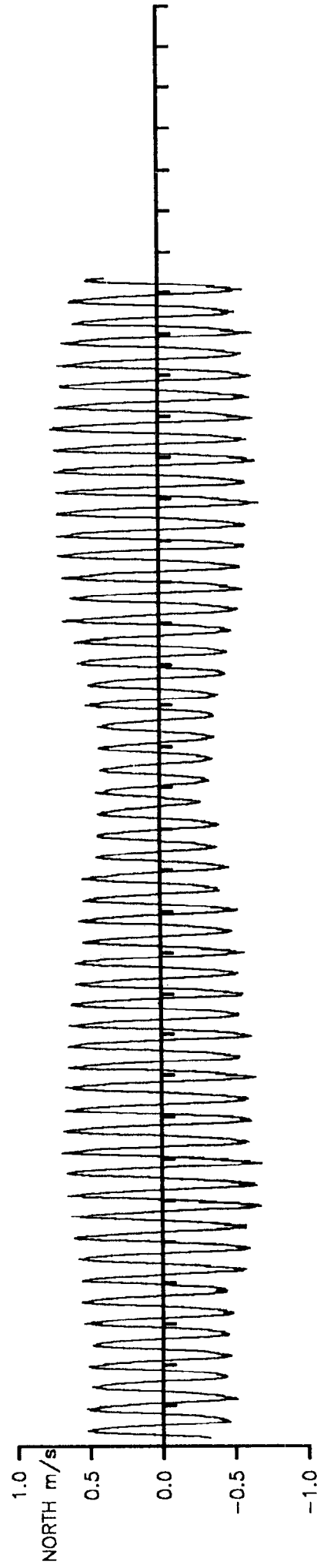
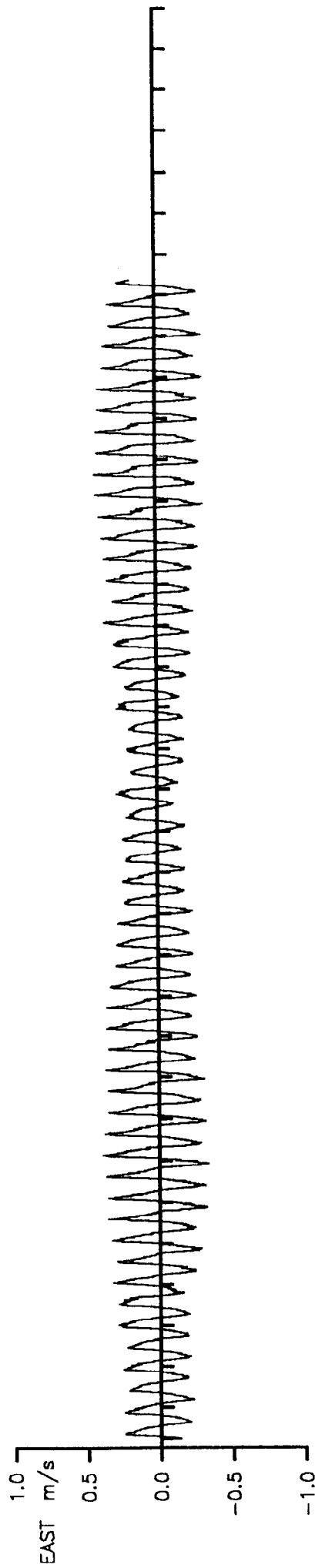
Maximum variance 0.4534E-03	Direction	31.6
Minimum variance 0.1605E-03	Direction	121.6
Total variance 0.6139E-03	Ratio of variances	0.3540E+00
Average direction. maxdir -PI/2 to maxdir +PI/2		33.1
Average direction. maxdir +PI/2 to maxdir -PI/2		142.2

Meter information details for 9352

Rig No	:	C57FC
Meter No	:	9352
Recording interval	:	600.0 seconds
Meter height from bottom	:	7.0 m
Position of meter on rig	:	B
Meter type	:	AS
Meter started	:	26-JULY-89 23:30:00
Meter stopped	:	24-AUG-89 18:30:05
Period switched on	:	28.8 days
Period of good data	:	28.2 days
Total number of scans	:	4056
Timing error	:	5 seconds slow
Comments	:	Pressure sensor indicates some instability between 27-JULY-89 and 02-AUG-89

VELOCITY COMPONENT TIME SERIES PLOT

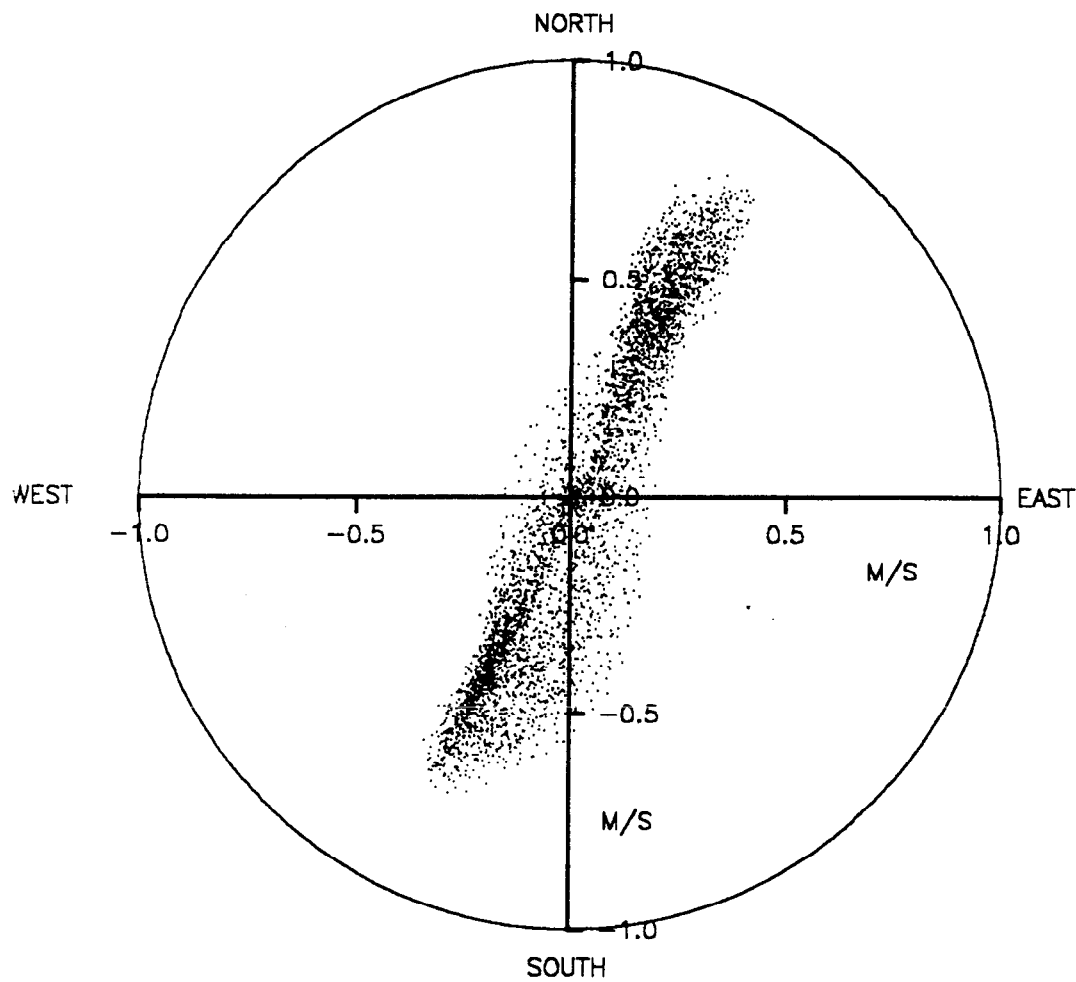
Meter no. 9352 Rig no. C57FC Depth of water(m) 30.0
Start/End 1989/07/27 AT 05:09:00 1989/08/24 AT 09:10:00
Position 52 37.00N 03 45.95E Meter Height(m) 7.0



27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
89
Jul Aug

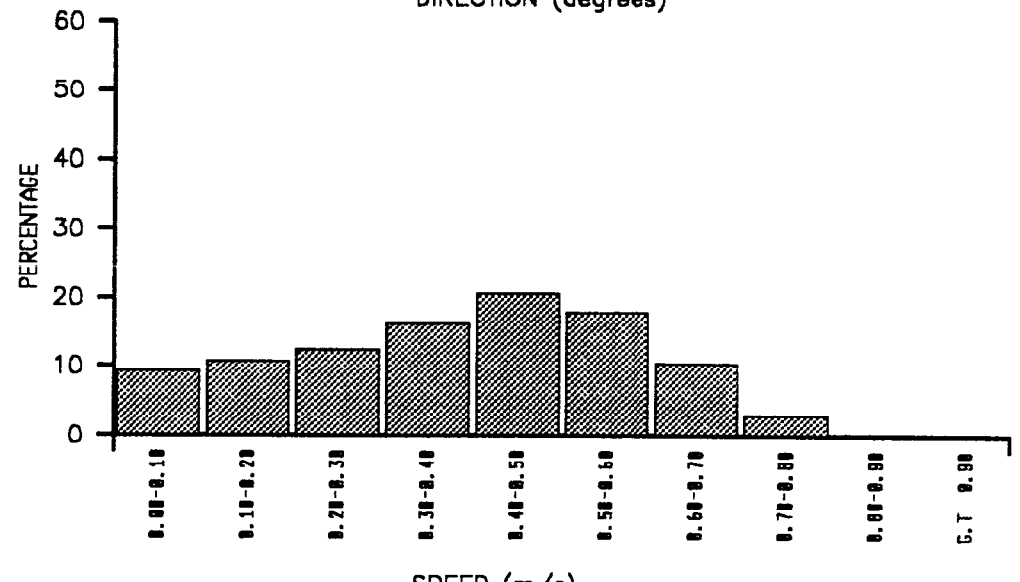
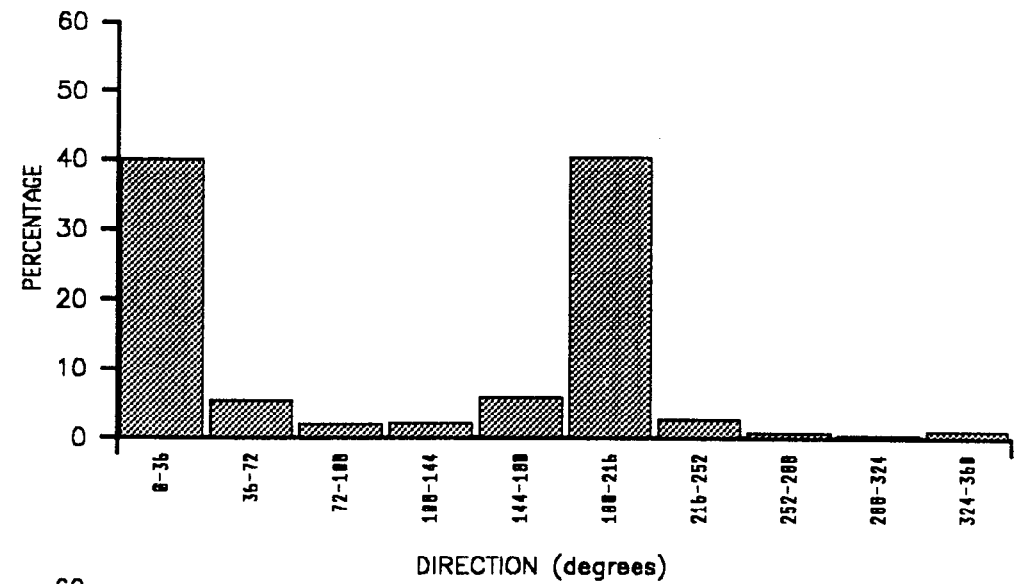
SCATTER PLOT

Meter no. 9352 Rig no. C57FC Depth of water(m) 30.0
 Start/End 1989/07/27 AT 05:09:00 1989/08/24 AT 09:10:00
 Position 52 37.00N 03 45.95E Meter Height(m) 7.0



HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 9352 Rig no. C57FC Depth of water(m) 30.0
 Start/End 1989/07/27 AT 05:09:00 1989/08/24 AT 09:10:00
 Position 52 37.00N 03 45.95E Meter Height(m) 7.0

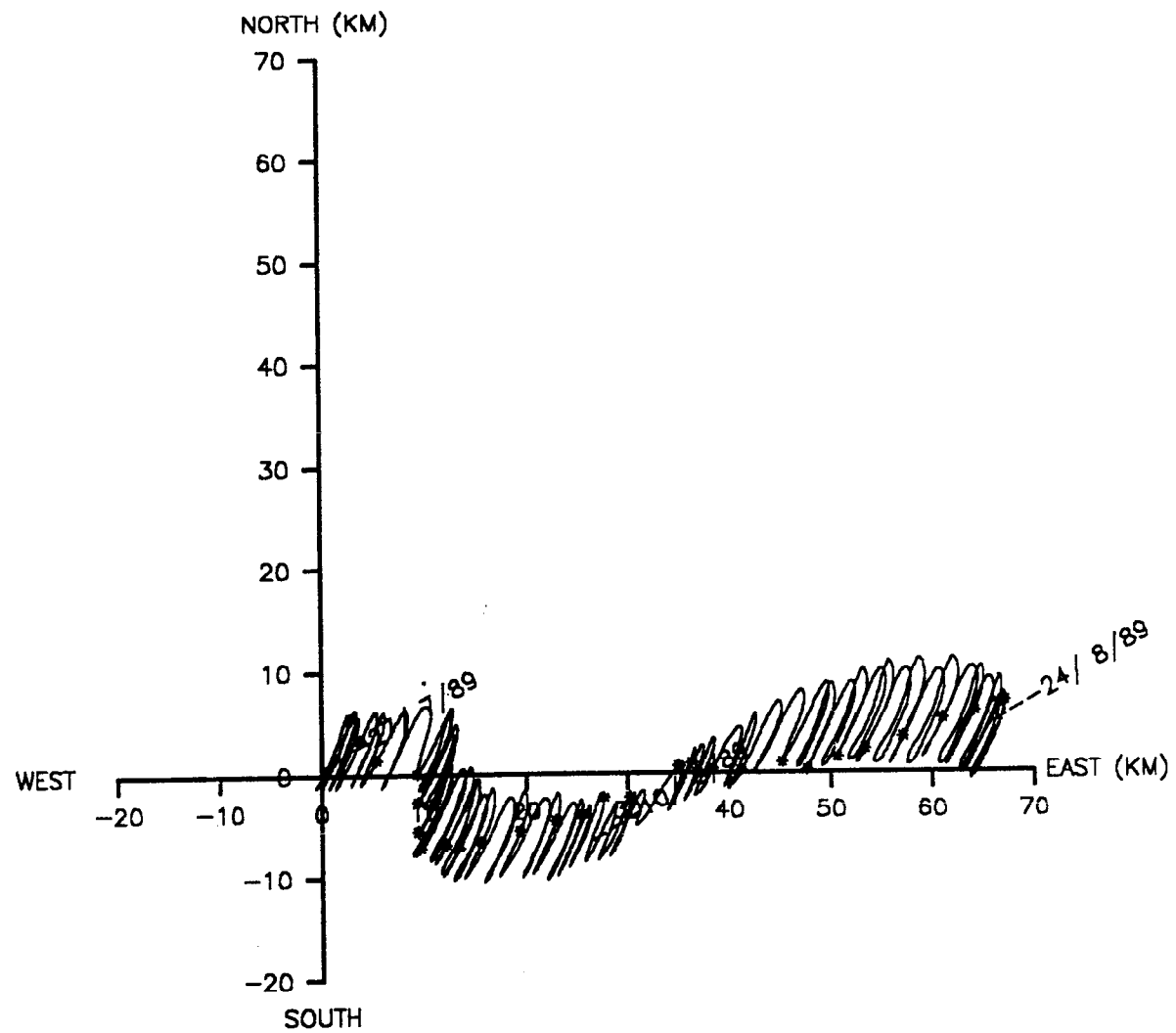


VECTOR PLOT

Meter no. 9352 Rig no. C57FC Depth of water(m) 30.0

Start/End 1989/07/27 AT 05:09:00 1989/08/24 AT 09:10:00

Position 52 37.00N 03 45.95E Meter Height(m) 7.0

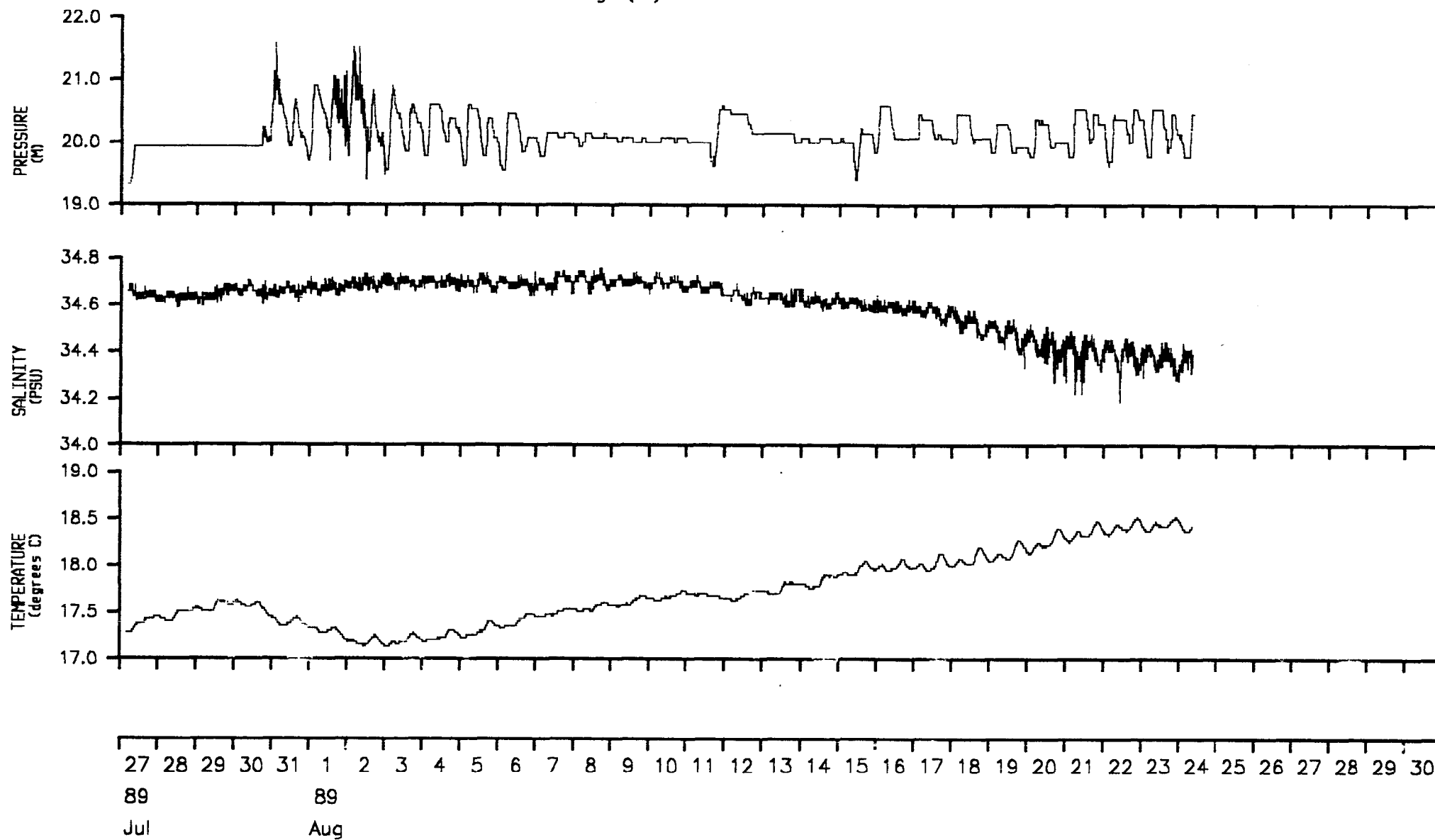


TEMPERATURE, SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9352 Rig no. C57FC Depth of water(m) 30.0

Start/End 1989/07/27 AT 05:09:00 1989/08/24 AT 09:10:00

Position 52 37.00N 03 45.95E Meter Height(m) 7.0



STATISTICS FOR AS9352B C57FCS A

	Mean	Variance	Standard deviation
Eastings	0.0272	0.31500414E-01	0.17748350E+00
Northings	0.0016	0.15292579E+00	0.39105725E+00
Speed	0.3873	0.35143603E-01	0.18746626E+00

Vector mean speed 0.0272
Vector Mean Direction 86.5

Maximum ten values

Eastings					Northings				
----------	--	--	--	--	-----------	--	--	--	--

0.419	0.410	0.408	0.408	0.404	0.740	0.733	0.717	0.714	0.714
0.404	0.401	0.396	0.393	0.392	0.706	0.706	0.706	0.705	0.701

Minimum ten values

Eastings					Northings				
----------	--	--	--	--	-----------	--	--	--	--

-0.317	-0.317	-0.318	-0.320	-0.321	-0.650	-0.650	-0.655	-0.658	-0.660
-0.321	-0.324	-0.326	-0.327	-0.338	-0.665	-0.673	-0.674	-0.684	-0.685

Maximum speeds

0.822	0.813	0.807	0.807	0.804	0.801	0.799	0.796	0.796	0.793
0.793	0.793	0.790	0.787	0.784	0.784	0.784	0.778	0.778	0.778
0.772	0.769	0.767	0.767	0.767	0.764	0.761	0.761	0.758	0.758
0.755	0.755	0.752	0.752	0.752	0.752	0.749	0.749	0.749	0.746
0.746	0.746	0.746	0.746	0.743	0.740	0.740	0.740	0.740	0.740
0.740	0.735	0.735	0.735	0.735	0.732	0.732	0.732	0.732	0.732
0.732	0.732	0.729	0.729	0.729	0.729	0.729	0.729	0.729	0.726
0.726	0.726	0.723	0.723	0.723	0.723	0.720	0.720	0.720	0.720
0.720	0.720	0.717	0.717	0.717	0.717	0.717	0.717	0.714	0.714
0.714	0.711	0.711	0.711	0.711	0.711	0.711	0.711	0.711	0.711

Variance ellipse statistics

Maximum variance 0.1811E+00	Direction	23.4
Minimum variance 0.3367E-02	Direction	113.4
Total variance 0.1844E+00	Ratio of variances	0.1859E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		5.9
Average direction. maxdir +PI/2 to maxdir -PI/2		173.7

STATISTICS FOR AS9352B C57FCSF A

	Mean	Variance	Standard deviation
Eastings	0.0291	0.26490400E-03	0.16275872E-01
Northings	0.0016	0.30992576E-03	0.17604712E-01
Speed	0.0349	0.19949675E-03	0.14124334E-01

Vector mean speed 0.0291
 Vector Mean Direction 86.8

Maximum ten values									
Eastings					Northings				
0.065	0.061	0.058	0.057	0.055	0.052	0.047	0.046	0.035	0.031
0.055	0.055	0.051	0.049	0.048	0.025	0.024	0.024	0.021	0.021

Minimum ten values									
Eastings					Northings				
0.006	0.005	0.002	0.002	0.002	-0.018	-0.018	-0.020	-0.021	-0.026
0.000	-0.003	-0.006	-0.010	-0.010	-0.028	-0.035	-0.042	-0.045	-0.048

Maximum speeds									
0.083	0.078	0.073	0.060	0.059	0.059	0.058	0.056	0.055	0.053
0.052	0.051	0.050	0.049	0.049	0.048	0.046	0.046	0.045	0.044
0.043	0.042	0.041	0.041	0.041	0.039	0.039	0.038	0.038	0.038
0.038	0.038	0.038	0.037	0.037	0.037	0.036	0.035	0.035	0.035
0.035	0.034	0.034	0.033	0.033	0.032	0.032	0.032	0.032	0.032
0.031	0.031	0.029	0.029	0.029	0.028	0.028	0.028	0.027	0.027
0.027	0.026	0.026	0.026	0.026	0.025	0.025	0.025	0.025	0.024
0.023	0.023	0.022	0.021	0.021	0.020	0.020	0.020	0.020	0.020
0.020	0.019	0.018	0.017	0.017	0.015	0.015	0.015	0.012	

Variance ellipse statistics

Maximum variance 0.5258E-03	Direction	42.3
Minimum variance 0.4902E-04	Direction	132.3
Total variance 0.5748E-03	Ratio of variances	0.9323E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		39.7
Average direction. maxdir +PI/2 to maxdir -PI/2		125.4

STICK TIME SERIES PLOT

Rig no. C57FC Depth of water(m) 30.0

Start/End 1989/07/27 AT 05:09:00 1989/08/24 AT 09:10:00

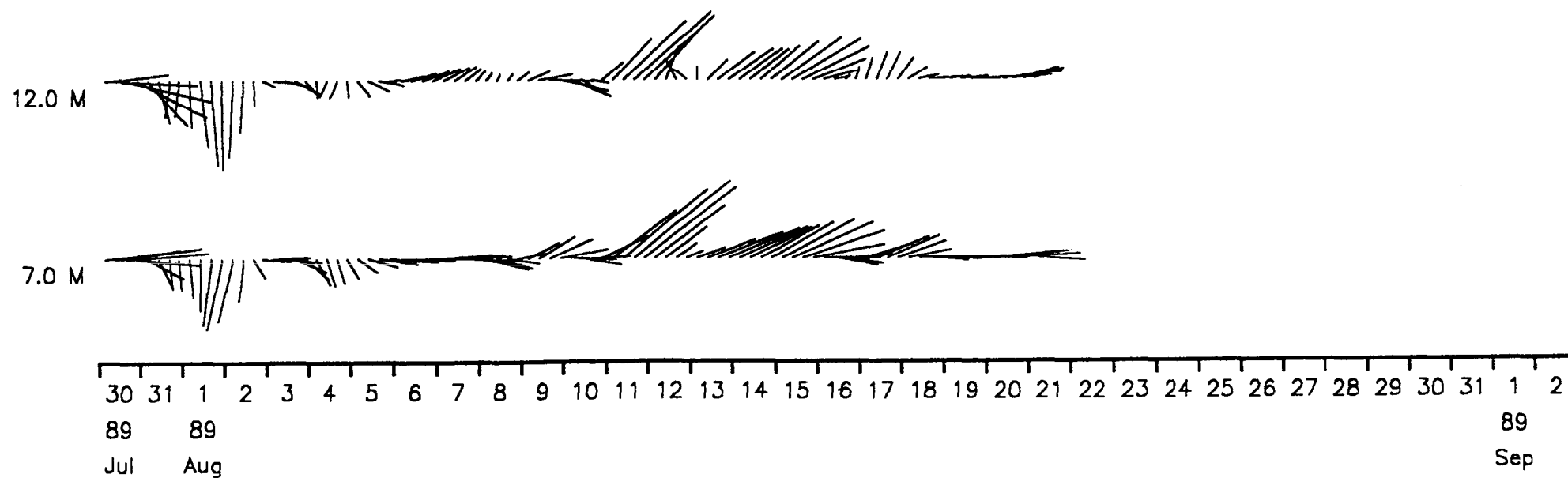
Position 52 37.00N 03 45.95E

Filtered Series Scale 0.1 m/s

Meter No. Meter Height

9352 7.0 M

1261 12.0 M



Rig information details for C59FC

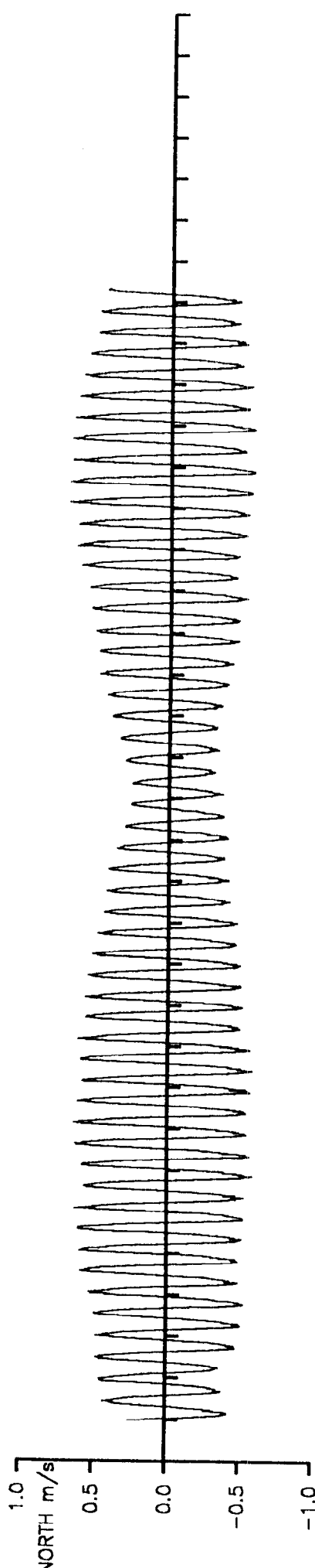
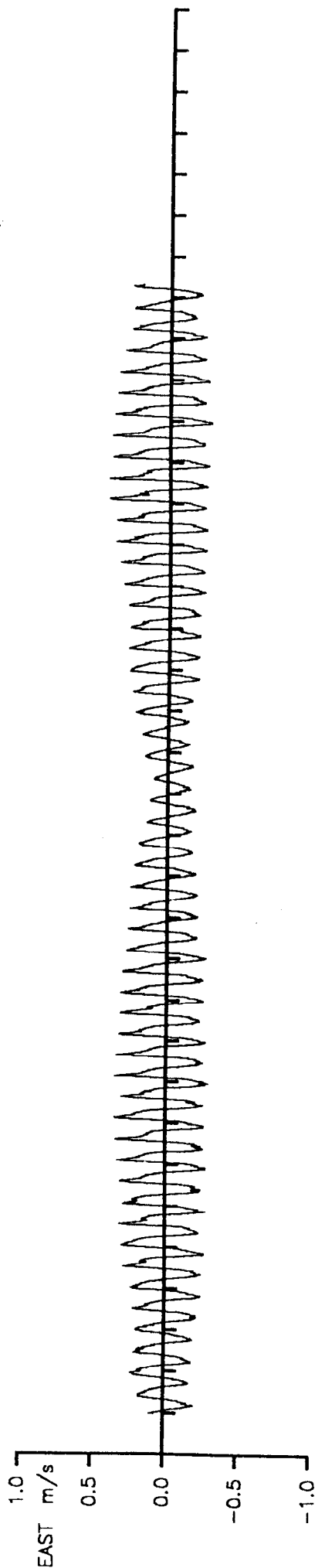
Position Latitude	:	52 36.88N
Position Longitude	:	03 46.09E
Water depth	:	30.0 m
Deployed on cruise	:	C59
Recovered on cruise	:	C61
Site name identification	:	F
Magnetic deviation	:	3.1 degrees west
Rig deployed on	:	25-AUG-89 23:41:00
Rig recovered on	:	22-SEPT-89 07:55:00
Period of deployment	:	27.3 days
Comments	:	Launch and recovery successful

Meter information details for 1261

Rig No	:	C59FC
Meter No	:	1261
Recording interval	:	600.0 seconds
Meter height from bottom	:	12.0 m
Position of meter on rig	:	T
Meter type	:	S4
Meter started	:	25-AUG-89 15:34:00
Meter stopped	:	22-SEPT-89 10:36:00
Period switched on	:	27.8 days
Period of good data	:	27.3 days
Total number of scans	:	3937
Timing error	:	120 seconds slow
Comments	:	Hourly time stamp has jumped by one minute at: (1) 25-AUG-89 15:34 to 16:35 (2) 10-SEPT-89 12:35 to 13:36

VELOCITY COMPONENT TIME SERIES PLOT

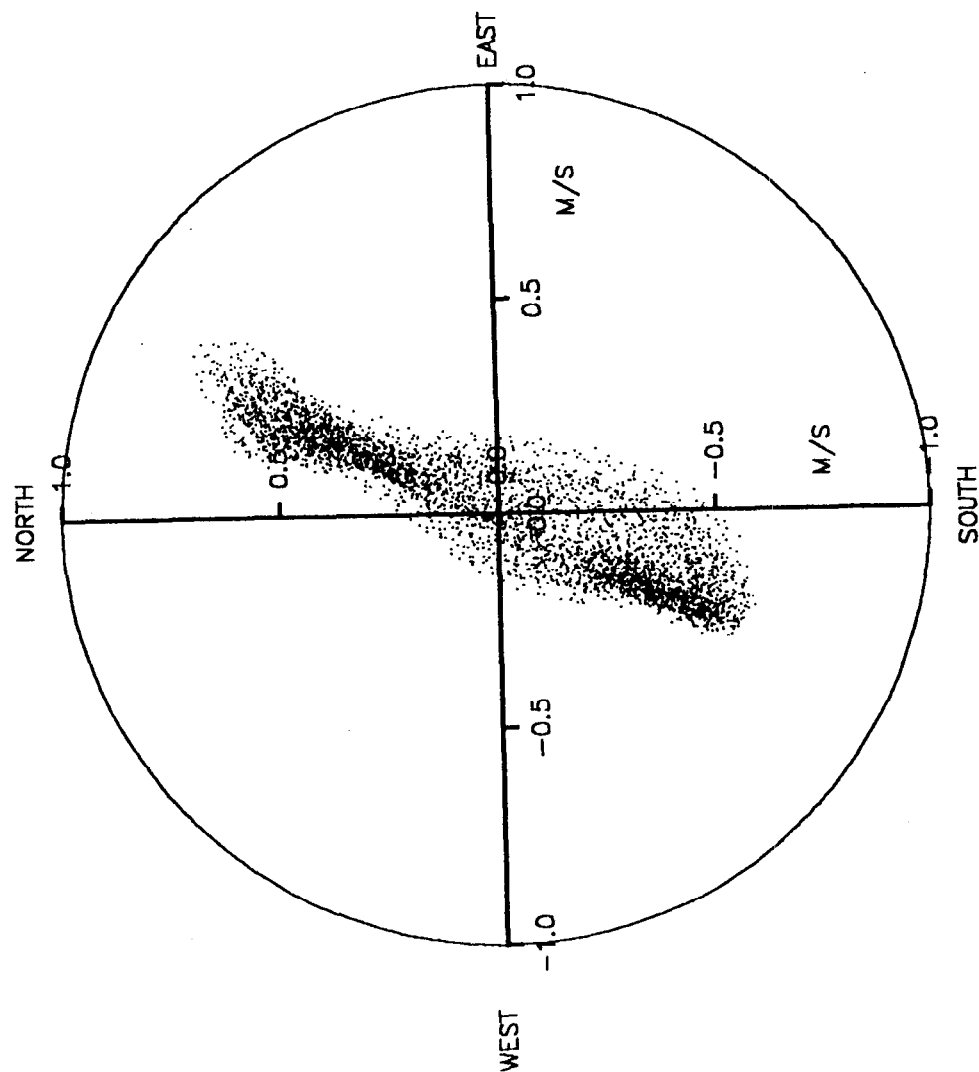
Meter no. 1261 Rig no. C59FC Depth of water(m) 30.0
Start/End 1989/08/25 AT 23:41:00 1989/09/22 AT 07:55:00
Position 52 36.88N 03 46.09E Meter Height(m) 12.0



25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
89 89
Aug Sep

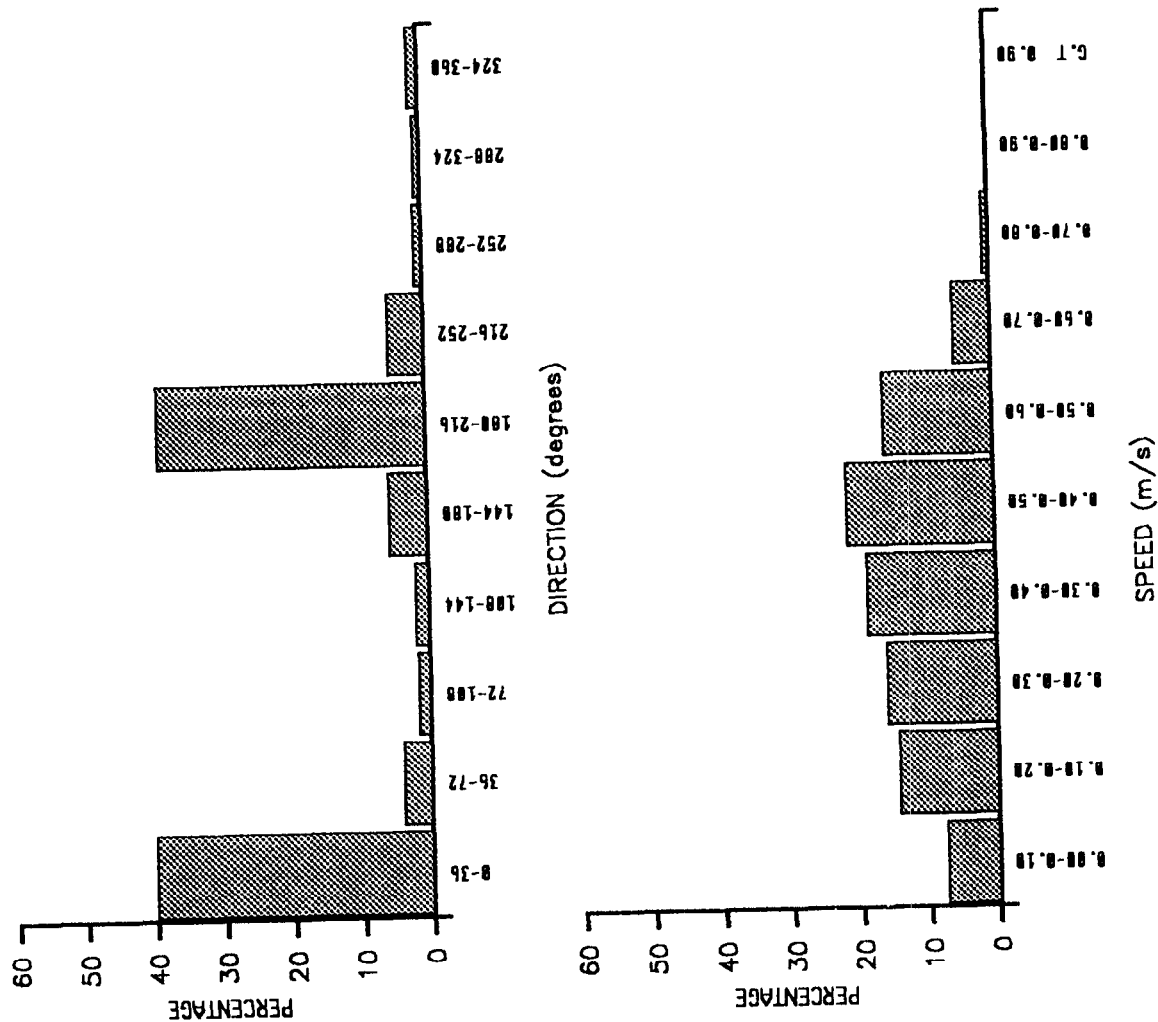
SCATTER PLOT

Meter no. 1261 Rig no. C59FC Depth of water(m) 30.0
 Start/End 1989/08/25 AT 23:41:00 1989/09/22 AT 07:55:00
 Position 52 36.88N 03 46.09E Meter Height(m) 12.0



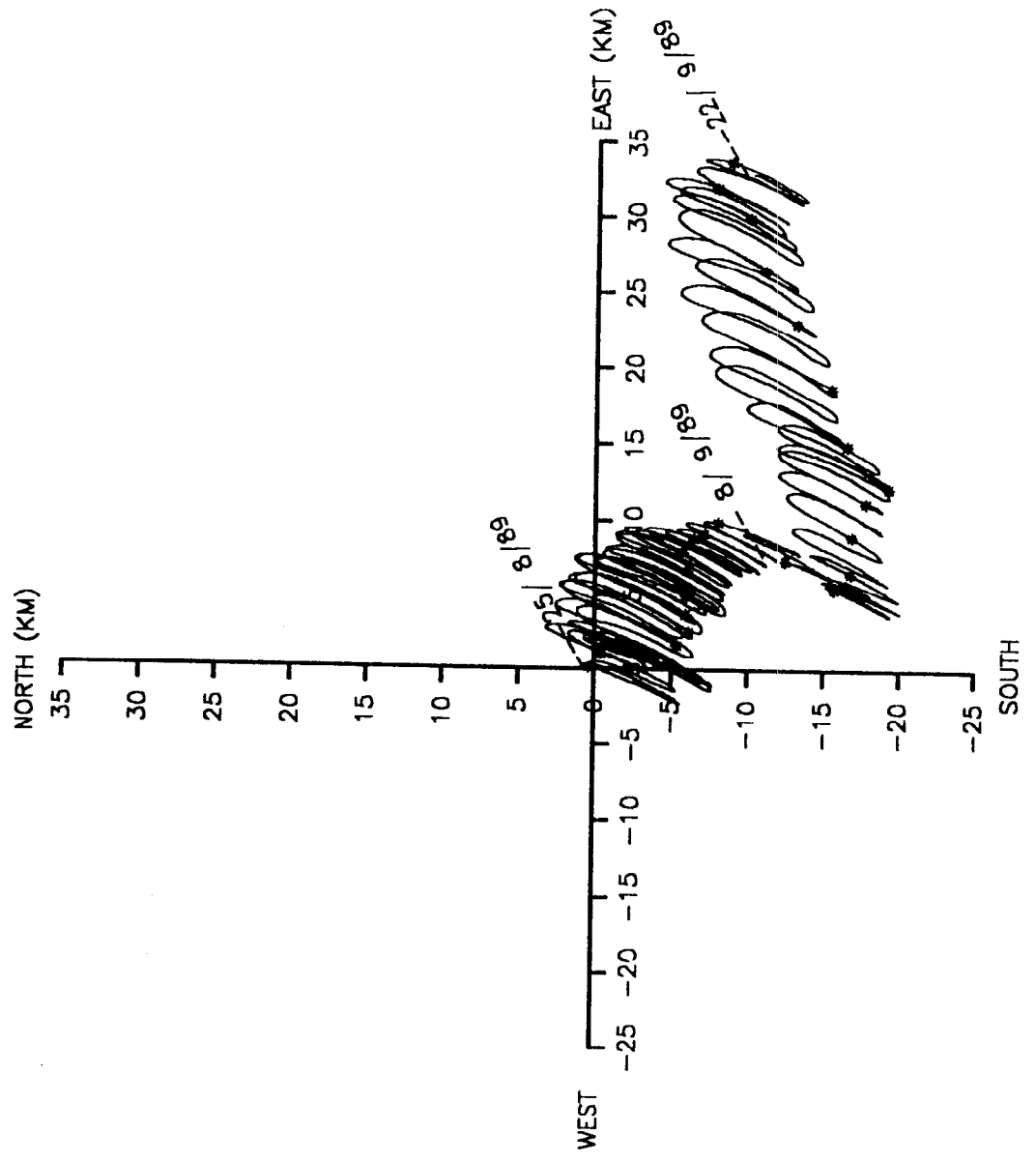
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1261 Rig no. C59FC Depth of water(m) 30.0
 Start/End 1989/08/25 AT 23:41:00 1989/09/22 AT 07:55:00
 Position 52 36.88N 03 46.09E Meter Height(m) 12.0



VECTOR PLOT

Meter no. 1261 Rig no. C59FC Depth of water(m) 30.0
Start/End 1989/08/25 AT 23:41:00 1989/09/22 AT 07:55:00
Position 52 36.88N 03 46.09E Meter Height(m) 12.0



STATISTICS FOR S41261T C59FCS A

	Mean	Variance	Standard deviation
Eastings	0.0139	0.28173752E-01	0.16785032E+00
Northings	-0.0043	0.12574089E+00	0.35459971E+00
Speed	0.3552	0.27933788E-01	0.16713405E+00

Vector mean speed 0.0146

Vector Mean Direction 107.1

Maximum ten values

Eastings

Northings

0.409	0.408	0.408	0.408	0.406	0.688	0.681	0.671	0.671	0.670
0.402	0.395	0.390	0.386	0.384	0.668	0.667	0.662	0.662	0.654

Minimum ten values

Eastings

Northings

-0.275	-0.279	-0.279	-0.279	-0.281	-0.567	-0.568	-0.570	-0.572	-0.574
-0.282	-0.283	-0.287	-0.290	-0.294	-0.574	-0.575	-0.576	-0.584	-0.589

Maximum speeds

0.785	0.784	0.763	0.760	0.760	0.758	0.751	0.750	0.748	0.743
0.742	0.740	0.737	0.736	0.734	0.732	0.726	0.725	0.724	0.723
0.722	0.718	0.711	0.710	0.707	0.706	0.705	0.704	0.704	0.702
0.702	0.702	0.702	0.700	0.697	0.697	0.697	0.697	0.694	0.692
0.692	0.690	0.688	0.680	0.680	0.679	0.679	0.679	0.678	0.678
0.677	0.677	0.677	0.677	0.676	0.675	0.674	0.673	0.673	0.673
0.670	0.670	0.669	0.668	0.668	0.664	0.664	0.664	0.663	0.662
0.662	0.661	0.660	0.660	0.660	0.659	0.658	0.657	0.657	0.657
0.657	0.657	0.656	0.656	0.655	0.655	0.654	0.653	0.653	0.652
0.652	0.652	0.651	0.651	0.651	0.650	0.650	0.649	0.648	0.647

Variance ellipse statistics

Maximum variance 0.1503E+00

Direction 24.2

Minimum variance 0.3594E-02

Direction 114.2

Total variance 0.1539E+00

Ratio of variances 0.2391E-01

Average direction. maxdir -PI/2 to maxdir +PI/2

3.2

Average direction. maxdir +PI/2 to maxdir -PI/2

177.0

STATISTICS FOR S41261T C59FCSF A

	Mean	Variance	Standard deviation
Eastings	0.0150	0.38390863E-03	0.19593589E-01
Northings	-0.0028	0.40708529E-03	0.20176351E-01
Speed	0.0277	0.25004917E-03	0.15812948E-01

Vector mean speed 0.0152
Vector Mean Direction 100.7

Maximum ten values									
Eastings					Northings				
0.045	0.044	0.043	0.043	0.042	0.044	0.039	0.038	0.026	0.025
0.042	0.042	0.042	0.041	0.040	0.022	0.021	0.021	0.020	0.019

Minimum ten values									
Eastings					Northings				
-0.006	-0.006	-0.010	-0.013	-0.019	-0.022	-0.022	-0.028	-0.035	-0.039
-0.023	-0.030	-0.032	-0.036	-0.036	-0.047	-0.049	-0.056	-0.057	-0.059

Maximum speeds									
0.069	0.067	0.064	0.060	0.057	0.057	0.053	0.052	0.048	0.047
0.046	0.045	0.044	0.044	0.043	0.042	0.042	0.042	0.042	0.042
0.041	0.040	0.039	0.039	0.038	0.038	0.037	0.037	0.037	0.036
0.035	0.035	0.035	0.031	0.031	0.031	0.028	0.028	0.025	0.025
0.024	0.022	0.022	0.022	0.021	0.021	0.020	0.020	0.019	0.019
0.019	0.019	0.018	0.018	0.017	0.017	0.017	0.016	0.016	0.016
0.016	0.016	0.015	0.015	0.015	0.014	0.014	0.014	0.014	0.014
0.013	0.013	0.013	0.012	0.012	0.012	0.012	0.011	0.010	0.010
0.010	0.009	0.009	0.008	0.007	0.005				

Variance ellipse statistics

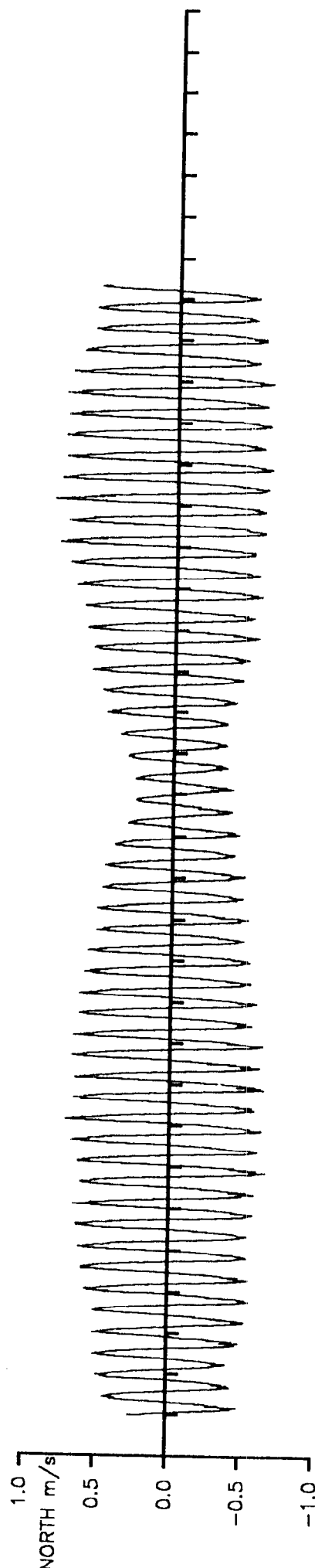
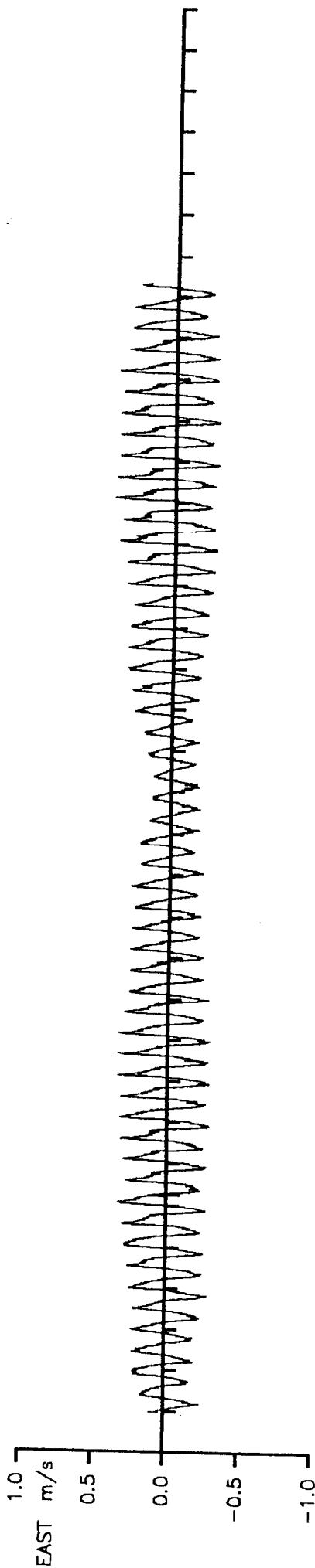
Maximum variance 0.7425E-03	Direction	44.0
Minimum variance 0.4845E-04	Direction	134.0
Total variance 0.7910E-03	Ratio of variances	0.6524E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		34.3
Average direction. maxdir +PI/2 to maxdir -PI/2		133.9

Meter information details for 9419

Rig No	:	C59FC
Meter No	:	9419
Recording interval	:	600.0 seconds
Meter height from bottom	:	7.0 m
Position of meter on rig	:	B
Meter type	:	AS
Meter started	:	25-AUG-89 15:05:00
Meter stopped	:	22-SEPT-89 14:55:00
Period switched on	:	28.0 days
Period of good data	:	27.3 days
Total number of scans	:	3937
Timing error	:	None
Comments	:	Good record obtained

VELOCITY COMPONENT TIME SERIES PLOT

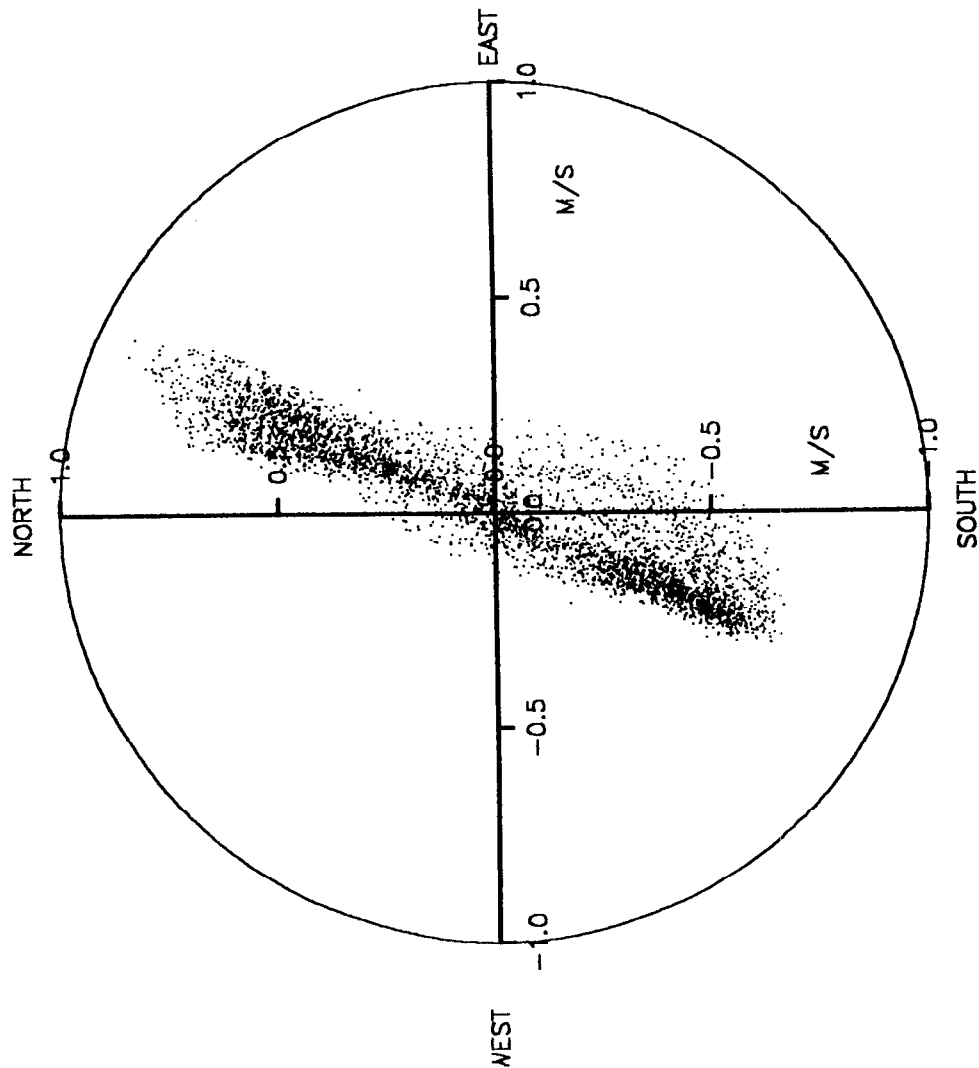
Meter no. 9419 Rig no. C59FC Depth of water(m) 30.0
Start/End 1989/08/25 AT 23:41:00 1989/09/22 AT 07:55:00
Position 52 36.88N 03 46.09E Meter Height(m) 7.0



25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
89 89
Aug Sep

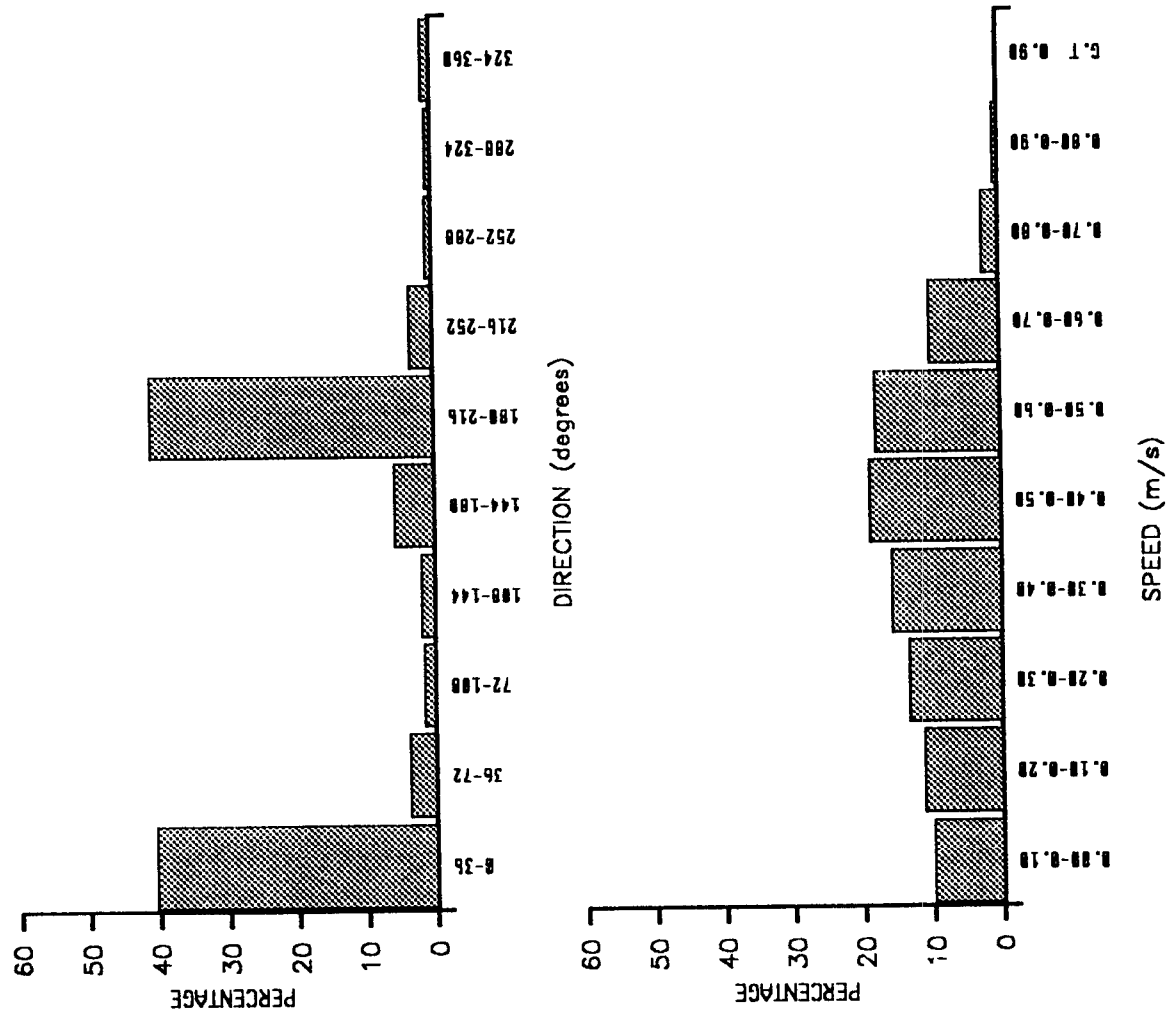
SCATTER PLOT

Meter no. 9419 Rig no. C59FC Depth of water(m) 30.0
 Start/End 1989/08/25 AT 23:41:00 1989/09/22 AT 07:55:00
 Position 52 36.88N 03 46.09E Meter Height(m) 7.0



HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 9419 Rig no. C59FC Depth of water(m) 30.0
 Start/End 1989/08/25 AT 23:41:00 1989/09/22 AT 07:55:00
 Position 52 36.88N 03 46.09E Meter Height(m) 7.0

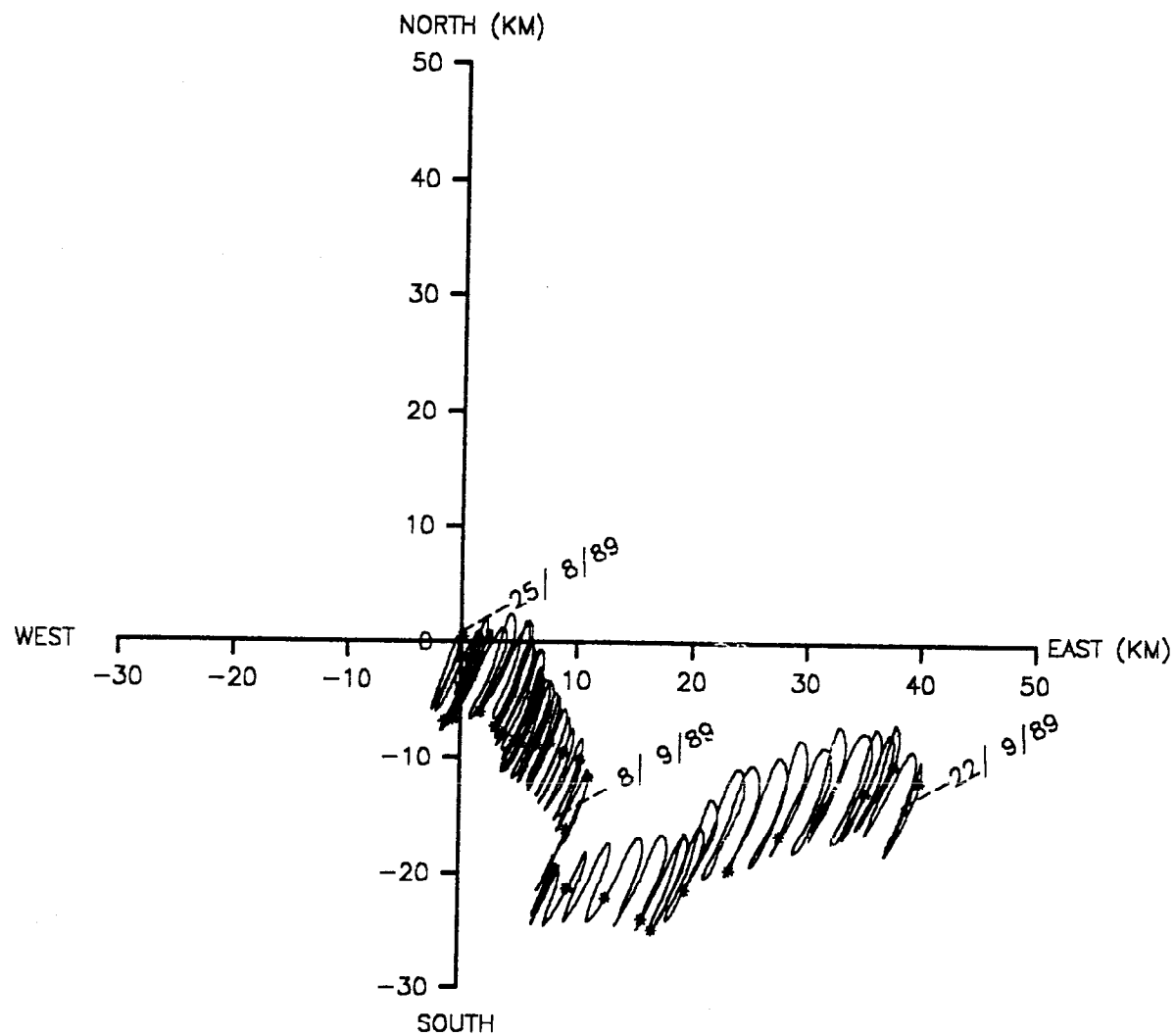


VECTOR PLOT

Meter no. 9419 Rig no. C59FC Depth of water(m) 30.0

Start/End 1989/08/25 AT 23:41:00 1989/09/22 AT 07:55:00

Position 52 36.88N 03 46.09E Meter Height(m) 7.0

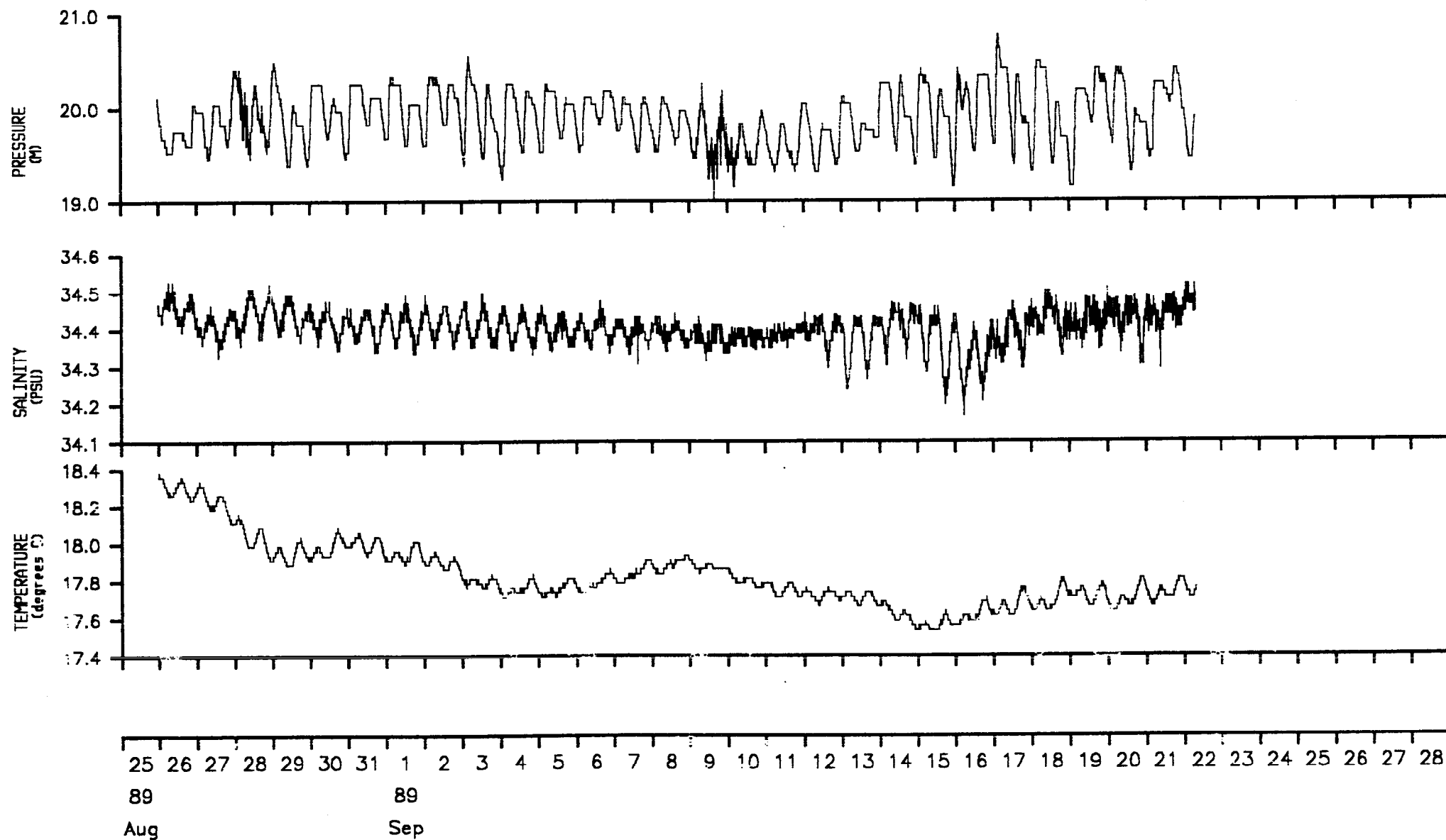


TEMPERATURE, SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9419 Rig no. C59FC Depth of water(m) 30.0

Start/End 1989/08/25 AT 23:41:00 1989/09/22 AT 07:55:00

Position 52 36.88N 03 46.09E Meter Height(m) 7.0



STATISTICS FOR AS9419B C59FCS A

	Mean	Variance	Standard deviation
Eastings	0.0163	0.26996214E-01	0.16430521E+00
Northings	-0.0062	0.15451807E+00	0.39308786E+00
Speed	0.3811	0.36580883E-01	0.19126129E+00

Vector mean speed 0.0175
Vector Mean Direction 110.9

Maximum ten values									
Eastings					Northings				
0.406	0.393	0.384	0.384	0.384	0.838	0.826	0.802	0.787	0.783
0.381	0.379	0.374	0.373	0.372	0.783	0.779	0.778	0.769	0.768

Minimum ten values									
Eastings					Northings				
-0.283	-0.284	-0.285	-0.287	-0.290	-0.637	-0.638	-0.641	-0.642	-0.642
-0.290	-0.293	-0.296	-0.299	-0.303	-0.643	-0.651	-0.655	-0.657	-0.663

Maximum speeds									
0.921	0.915	0.871	0.862	0.860	0.857	0.857	0.854	0.851	0.845
0.839	0.836	0.836	0.833	0.830	0.828	0.825	0.822	0.816	0.813
0.813	0.813	0.804	0.801	0.801	0.801	0.799	0.796	0.796	0.793
0.790	0.790	0.790	0.787	0.787	0.784	0.781	0.778	0.778	0.772
0.772	0.772	0.772	0.769	0.769	0.767	0.767	0.761	0.761	0.758
0.755	0.755	0.755	0.749	0.749	0.746	0.743	0.743	0.743	0.743
0.737	0.737	0.737	0.737	0.737	0.737	0.735	0.732	0.732	0.732
0.729	0.729	0.729	0.729	0.726	0.726	0.726	0.723	0.723	0.723
0.723	0.723	0.723	0.720	0.720	0.720	0.720	0.720	0.720	0.720
0.717	0.717	0.717	0.717	0.717	0.717	0.714	0.714	0.714	0.711

Variance ellipse statistics

Maximum variance 0.1778E+00	Direction	21.5
Minimum variance 0.3699E-02	Direction	111.5
Total variance 0.1815E+00	Ratio of variances	0.2081E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		4.1
Average direction. maxdir +PI/2 to maxdir -PI/2		176.1

STATISTICS FOR AS9419B C59FCSF A

	Mean	Variance	Standard deviation
Eastings	0.0180	0.38804533E-03	0.19698866E-01
Northings	-0.0046	0.45534386E-03	0.21338787E-01
Speed	0.0306	0.24554250E-03	0.15669800E-01

Vector mean speed 0.0186
 Vector Mean Direction 104.4

Maximum ten values									
Eastings					Northings				
0.055	0.054	0.052	0.051	0.049	0.055	0.049	0.048	0.033	0.032
0.047	0.047	0.045	0.045	0.045	0.018	0.018	0.017	0.017	0.017

Minimum ten values									
Eastings					Northings				
-0.001	-0.003	-0.006	-0.010	-0.010	-0.025	-0.030	-0.030	-0.037	-0.041
-0.014	-0.021	-0.022	-0.027	-0.027	-0.043	-0.049	-0.050	-0.053	-0.054

Maximum speeds									
0.066	0.063	0.060	0.060	0.058	0.055	0.054	0.054	0.054	0.053
0.052	0.051	0.051	0.050	0.049	0.049	0.047	0.046	0.045	0.045
0.044	0.043	0.043	0.043	0.042	0.041	0.041	0.041	0.041	0.040
0.038	0.037	0.037	0.036	0.035	0.032	0.032	0.031	0.031	0.030
0.030	0.027	0.025	0.023	0.023	0.022	0.022	0.021	0.021	0.021
0.021	0.021	0.021	0.021	0.020	0.020	0.020	0.020	0.020	0.020
0.019	0.019	0.019	0.018	0.018	0.018	0.017	0.016	0.016	0.016
0.016	0.014	0.014	0.014	0.014	0.014	0.013	0.013	0.013	0.013
0.013	0.012	0.011	0.010	0.009	0.006				

Variance ellipse statistics

Maximum variance 0.7576E-03	Direction	42.1
Minimum variance 0.8579E-04	Direction	132.1
Total variance 0.8434E-03	Ratio of variances	0.1132E+00
Average direction. maxdir -PI/2 to maxdir +PI/2		38.0
Average direction. maxdir +PI/2 to maxdir -PI/2		127.0

STICK TIME SERIES PLOT

Rig no. C59FC Depth of water(m) 30.0

Start/End 1989/08/25 AT 23:41:00 1989/09/23 AT 07:55:00

Position 52 36.88N 03 46.09E

Filtered Series Scale 0.1 m/s

Meter No. Meter Height

9419 7.0 M

1261 12.0 M

